ON AUSTRALIAN COLEOPTERA OF THE FAMILY MALACODERMIDAE.

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(Contribution from the South Australian Museum.)

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The Malacodermidae of Australia were revised by me in 1909,(1) since when comparatively few species have been named; but great attention having recently been paid to the family, and the Blackburn collection containing many novelties, many more species can now be added.

METRIORRHYNCHUS RHIPIDIUS, W. S. Macl.

A specimen, from the Victorian Alps, may represent another variety of this species, its rostrum is long, although rather less than the average length of the species; but its prothorax appears to be five-areolate in an unusual way: from the central areolet three costae connect with the apex (the two side ones are not very distinct from above, but are distinct from the sides), so that there are two small mediofrontal areolets, a fairly large central one, and a very large one on each side; each of the lateral ones has a feeble transverse elevation across part of its middle, but, as it is not in the form of a distinct costa joined to the others, the prothorax cannot be regarded as seven-areolate. In all undoubted specimens of *M. rhipidius* that I have examined the prothorax is distinctly seven-areolate. The specimen may be an individual aberration, of which so many occur in the genus.

METRIORRHYNCHUS FOLIATUS, Macl.

There were two specimens standing in the Macleay Museum as types of this species, and they agree exactly in colour, but only one agrees in structure with the description; it is a male. The other is a female, but certainly not of the same species, its rostrum being much longer and thinner, and prothorax of a very different shape; I have described it as *M. insignicornis.*

METRIORRHYNCHUS SERRATICORNIS, Macl.

Two females, from Cairns, probably belong to this species, but have the hind femora, tibiae and tarsi, middle tibiae, tarsi, and half of the femora blackish, and the scutellum infuscated.

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(1) Lea, Trans. Ent. Soc. Lond., 1909, pp. 45-251.

METRIORRHYNCHUS FUMOSUS, Macl.

Seven specimens, from Cairns, agree with the types of this species, they are opaque-black, to the naked eye (owing to pubescence) appearing a smoky-brown, the antennae are strongly serrated in both sexes, and the scutellum is somewhat narrowed posteriorly, with its end truncated; the length varies from 5 to 9 mm. The female differs from *M. opacus*, of which only a female is known, in the more strongly serrated antennae, prothorax almost parallel-sided and shorter, and in the scutellum, that of *opacus* being emarginate at the apex, with the ends conspicuously produced.

METRIORRHYNCHUS CENTRALIS, Macl.

The types of this species are females; in general appearance they are extremely close to the types of *M. elongatus*, but differ in the central areolet of the prothorax; on *M. centralis* it is terminated fully one-third from the apex of the prothorax, on *elongatus* it extends much nearer to the apex. Two males, from Cairns, that probably belong to *centralis*, differ from the types in being somewhat smaller and narrower, antennae and legs longer, the former more strongly serrated, the prothorax less transverse, and in the abdomen.

METRIORRHYNCHUS GRACILIS, Lea.

On this species the front margin of the prothorax is thickened, with a row of punctures almost dividing it into two parallel parts. A second specimen agrees with the type in having the four front areolets of the prothorax ill-defined; but on two males they are sharply defined, their connecting costae being distinct to the hind part of the apical thickening; one of these males has the black tips to the elytra rather larger than on the others, although they are still rather small and oblique.

METRIORRHYNCHUS ATRICORNIS, Lea.

A specimen, from Cairns, probably belongs to this species, but has the scutellum black, and extreme base of elytra flavous; the sides of its prothorax near the base are suddenly incurved, but the angles themselves are much as on the typical form; the difference is probably due to contraction in drying. In my table,(2) owing to the elytra not being entirely dark, it would be associated with *M. ampliatus*, but that species has the pale basal portion larger (distinct to the naked eye), and prothorax with five, instead of three, areolets.

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(2) Lea, Trans. Ent. Soc. Lond., 1909, p. 51.

METRIORRHYNCHUS HETERODOXUS, Lea.

A specimen, from the Dividing Range in Victoria, appears to represent a variety of this species, its elytra have more of the tips red than on the type, but the pale parts of the sides are narrower and terminate before the base, instead of being somewhat dilated on the shoulders, the sides of the prothorax are narrowed in the middle, the true second joint of the antennae is concealed from above, and the third is even shorter than on the type. In the original description by a misprint, the first joint of the antennae was made to read "as long as wide *and* almost concealed"; the reading should have been "*2nd* almost concealed."

METRIORRHYNCHUS OCCIDENTALIS, Blackb.

M. disconiger, Lea, var.

The type and only specimen of this species known to Blackburn is now in the British Museum, but several specimens, from the Mallee District of Victoria, agree perfectly with the description.

Two males, from Hobart, appear to represent a variety of it, they have the black mark of the elytra at its widest almost extending to the middle of each elytron, and continued from the scutellum to slightly nearer the apex than on the typical form; these specimens agree with the description of *M. disconiger*, consequently the latter name must be regarded as a varietal one only.

METRIORRHYNCHUS EREMITUS, Blackb.

Three specimens, from Eden (New South Wales), differ from the typical form of this species in having the pale portion of the elytra confined to the tips, and of the prothorax to the sides.

METRIORRHYNCHUS MELASPIS, Bourg.

This species was described as 8-9 mm. in length, with the abdomen (3) and tibiae entirely pale, and the apex of the labrum and the palpi black. There are numerous specimens in the Museum from the Northern Territory (Mary River and Darwin) that appear to belong to the species, but have the labrum entirely pale, and palpi either entirely pale, or partly infuscated; they measure 8-10 mm. in length. The antennae are strongly serrated in the male, with some of the joints subpectinate; in the female they are less strongly serrated.

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(3) By a clerical error in my table the abdomen was noted as "partly" pallid.

Some specimens, from Queensland (Coen River and Cooktown) and North-western Australia (King Sound), are considerably larger (up to 15 mm.), and have the tips of the tibiae, labrum (wholly or in part) and palpi blackish, with the knees infuscated or not.

METRIORRHYNCHUS CANCELLATUS, Lea.

A female of this species, from Gosford (New South Wales), has the antennae much less strongly serrated than in the male, and the third joint of antennae no longer than the fourth.

METRIORRHYNCHUS DIMINUTIVUS, Lea.

Two females, from Cairns, probably belong to this species, they differ from the description in having the dark parts black instead of blackish-brown, the scutellum no paler than the elytra, and the antennae, except the minute second joint, entirely dark.

METRIORRHYNCHUS RAMOSUS, Lea.

Two males, from Mount Tambourine, probably belong to this species, but differ from the type in having the antennal rami shorter, and rather less of the elytra black.

METRIORRHYNCHUS PARVONIGER, n. sp.

♂. Sooty-black.

Head irregularly concave between eyes, muzzle very short. Antennae rather long and feebly serrated, third joint the length of fifth and slightly wider, but at apex no narrower than fourth, slightly longer than the apical width, the others all distinctly longer than wide, after the sixth decreasing in width, and after the eighth in length also, but eleventh slightly longer than tenth. *Prothorax* small, seven-areolate, apical costae sharply defined and rather long, front angles almost rectangular, hind ones acutely produced, sides angularly diminishing to middle. *Scutellum* obtusely bilobed at apex. *Elytra* with single rows of large, transversely-oblong punctures, close to base a few doubled. Length (♂, ♀), 5·5-6 mm.

♀. Differs in having antennae shorter, thinner, and even more feebly serrated, and in the abdomen.

Hab.—Queensland: Cairns district (E. Allen and A. M. Lea). Type, I. 11810.

On each elytron almost throughout there are but five rows of punctures, about the tips they are less angular than elsewhere, and close to the base a few of the punctures in the second and third rows are doubled. The female, taken *in cop.* with the type, has the sides of the prothorax obscurely diluted with red. The variation in colour of the prothorax would distribute the specimens, in my table; the female with it bicolorous would go with *M. coenosus*, which has the elytral margins pale, and the others with *M. insignipennis*, which is a consistently larger Tasmanian species, with somewhat different antennae, and shining elytra. At first glance it resembles *M. fumosus* and *T. ater*, the former has elytral punctures in double series, the latter differs in generic features.

Var. (?) A female, also from Cairns, possibly belongs to this species, but has the third to tenth joints of antennae strongly serrated (subpectinate), its colours are as in the type female, except that each shoulder is obscurely diluted with red. Probably, however, it represents a new species.

METRIORRHYNCHUS MIMICUS, n. sp.

♂. Black, tips of elytra brick-red.

Head with muzzle very short. Antennae rather long, third to tenth joints feebly serrated, third to sixth joints about the same width at apex, the others decreasing in width, eleventh about two-thirds the width of tenth, and slightly longer. *Prothorax* conspicuously seven-areolate, strongly narrowed to middle, hind angles produced but tips rounded off. *Scutellum* almost truncate at apex. *Elytra* narrow, slightly dilated posteriorly; with single rows of large, quadrangular punctures, becoming double for a short distance at base and about tips. Length, 7 mm.

Hab.—Victoria: Belgrave (F. E. Wilson). Type (unique), I. 12271.

In general appearance strikingly close to the variety *haemorrhoidalis* of *M. rufipennis*, but the elytral punctures in single series (except for a very small part of the base and of the apex); *M. paradoxus* is somewhat larger, with the sides and more of the apex of elytra reddish, the punctures larger, and the interstices not alternately more strongly elevated, as the third and fifth are on this species.

METRIORRHYNCHUS MINUTUS, n. sp.

♀. Black, basal three-fifths of elytra reddish, base and sides of prothorax narrowly and obscurely reddish.

Head with muzzle short. Antennae rather short, wide, and moderately serrated, most of the joints slightly shorter than their greatest width. *Prothorax* small, distinctly seven-areolate, slightly longer than apical width, apex slightly produced in middle, front angles rectangular, hind ones produced, but not very actue. *Elytra* rather thin; with single rows of punctures, except on basal fifth, where they are doubled. Length, 5 mm.

Hab.—Queensland: Port Denison (Aug. Simson). Type (unique), I. 11814.

A minute species which, in my table, would be placed with *M. coenosus*, which has tips and sides of elytra pale, and somewhat different antennae; besides the bicoloured prothorax it differs from *M. basalis* in having much smaller elytral punctures, with costae evenly elevated, and antennae somewhat wider.

METRIORRHYNCHUS MARGINICOLLIS, n. sp.

♀. Black, elytra and sides of prothorax brick-red.

Head with muzzle very short. Antennae not very long, moderately wide, third to tenth joints feebly serrated, third distinctly longer than fourth, eleventh scarcely perceptibly longer than tenth. *Prothorax* slightly longer than apical width, conspicuously seven-areolate, sides almost parallel on apical half, then angularly dilated to base, where the angles are acute. *Elytra* thin; with single rows of large, quadrangular punctures. Length, 5·5 mm.

Hab.—Queensland: Mount Tambourine (A. M. Lea). Type (unique), I. 11813.

Rather narrower than *M. uniseriatus*, and antennae very different from those of its female, and the sides of the prothorax pale; the antennae are more like those of *M. minor*, but the elytral punctures and costae are regular to the base, and the sides of the prothorax are pale; it is also close to *M. minutus*, but the elytra are entirely pale, with larger punctures and alternate interstices slightly elevated above the others; in my table would be placed with *M. coenosus*, but the antennae are different, and the elytra entirely pale.

METRIORRHYNCHUS FULIGINEUS, n. sp.

♀. Sooty-black.

Head with very short muzzle. Antennae rather long and moderately wide, third to tenth joints serrated, third longer than fourth, and eleventh longer than tenth. *Prothorax* triareolate; median areolet rather narrow in its middle (where it is widest), and continuous from base to apex, sides strongly elevated and evenly curved, front angles rounded off, hind ones produced and sharply acute. *Elytra* slightly wider near apex than base; with double rows of punctures becoming irregular about tips; alternate interstices distinctly elevated. Length, 6 mm.

Hab.—Queensland: Cairns district (A. M. Lea). Type (unique), I. 11819.

Allied to *M. kingensis*, but with apex of prothorax not notched in middle. I have previously given (4) two short tables of species of Lycides almost identical in colours, but separated by profound structural differences, and one of entirely black species may be of interest:—

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(4) Lea, Trans. Ent. Soc. Lond., 1909, pp. 62, 63.

Prothorax not divided into conspicuous areolets ... ... *D. melancholica*, Lea
Prothorax with conspicuous areolets.
  Subsutural costa trifurcate near base ... ... *T. ater*, Macl.
  Subsutural costa simple.
    Elytral punctures in single series.
      Elytra opaque ... ... *M. parvoniger*, Lea
      Elytra shining ... ... *M. insignipennis*, Blackb.
    Elytral punctures in double series.
      Prothorax three-areolate.
        Apex of prothorax deeply notched in middle ... ... *M. kingensis*, Lea
        Apex not notched ... ... *M. fuligineus*, Lea
      Prothorax seven-areolate.
        Antennae of male ramose ... *M. funestus*,(5) Lea
        Antennae of male not ramose ... ... *M. rufipennis*, Fab., var.

METRIORRHYNCHUS INSIGNICORNIS, n. sp.

♂. Black; prothorax (except for a large blackish discal blotch) and elytra brick-red.

Head with rostrum unusually long and thin. Antennae long, the first six joints with long and fairly dense hairs on the under-surface, first joint small, second minute, third long and thin (about four times as long as wide), fourth about two-thirds the length of third, and slightly longer than fifth, the latter feebly produced on one side at apex, sixth the length of fifth but strongly produced at apex, seventh to tenth shorter and pectinate, eleventh thin. *Prothorax* moderately transverse, seven-areolate, apex produced in middle, sides incurved to middle, base trisinuate, the hind angles moderately acute. *Scutellum* with two rather acute tips. *Elytra* thin and parallel-sided, with regular double rows of punctures, the alternate interstices elevated. Subapical segment of *abdomen* notched in middle almost to base. Front and middle *trochanters* each with an acute spine, hind pair largely produced and truncated; front femora flat and unarmed, middle femora with a small tooth at basal third; hind pair much stouter than the others, obtusely dentate about middle, largely excavated on one side of base, and clothed on under-surface with long hairs as on antennae; hind tibiae thicker than the others, and with hairs as on femora. Length (♂, ♀), 9-10 mm.

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(5) An allied species (probably undescribed) occurs in the Madang district of New Guinea.

♀. Differs in having antennae shorter, without long hairs, the joints after the fifth serrated but not pectinated, legs unarmed, hind femora no stouter than the others, and without special clothing, and abdomen not notched.

Hab.—Queensland: Gordonvale (Dr. J. F. Illingworth), Cairns (Macleay Museum). Type, I. 11820.

At first glance strikingly close to *M. lateralis* and similarly coloured species, but the remarkable antennae and legs readily distinguish the male from all previously named males of the genus. One of the females was placed with the type of *M. foliatus* in the Macleay Museum, but it is certainly not that species, from which it differs in having the rostrum much longer, and sides and apex of prothorax very different. The rostrum is distinctly longer than the prothorax in both sexes; the black of the prothorax touches the base, except in middle, but not the sides or apex.

METRIORRHYNCHUS PALLIDOMINOR, n. sp.

♂. Flavous; tips of elytra, six apical joints of antennae and parts of two preceding ones, palpi and tarsi (except claw-joint) black or infuscated.

Head with rostrum of moderate length. Antennae rather long, third to tenth joints oblong, third about one half longer than fourth, eleventh one half longer than tenth. *Prothorax* slightly longer than wide; conspicuously seven-areolate; apex obtusely produced in middle, sides gently incurved to middle, hind angles slightly rounded, the front ones strongly. *Elytra* thin and parallel-sided; with regular double rows of punctures, alternate interstices slightly elevated. Length (♂, ♀), 5-6 mm.

♀. Differs in having somewhat shorter antennae and wider abdomen, with the subapical segment not notched.

Hab.—Northern Territory: thirty miles east of Darwin (G. F. Hill). Type, I. 12265.

A small, thin, pale species, not very close to any other known to me; the blackish tips to the elytra are about one-eighth of their length; the antennae might fairly be regarded as nonserrated; the frontal areolets of the prothorax are longer than usual. The length of the rostrum (including the mandibles) is somewhat less than the basal width, and not half the length of the prothorax; regarding it as of moderate length, in my table it would be placed with *M. rufirostris*: regarding it as short, with *M. fallax;* each of which species is considerably larger, with black under-surface and legs.

METRIORRHYNCHUS FUNESTUS, n. sp.

♂. Sooty-black.

Head with very short rostrum. Antennae rather long, third to tenth joints ramose, eleventh more than twice the length of the non-ramose portion of tenth. *Prothorax* moderately transverse; conspicuously seven-areolate; front angles slightly obtuse, hind ones produced and acute, sides almost parallel to near base. *Elytra* parallel-sided; with somewhat irregular double rows of punctures, the alternate interstices distinctly elevated. Length, 5·5-6·5 mm.

Hab.—Queensland: Cairns district (A. M. Lea). Type, I. 11825.

Readily distinguished from all previously named black species by the long antennal rami; *M. opacus*, of which only the female is known, has very different prothorax; the ramus of the third joint commences near the middle of the inner side, on the others it is gradually advanced till on the tenth it commences near the tip, on the third and tenth joints it is almost twice the length of the supporting portion, on each of the intervening joints it is more than twice the length of its supporting portion. Of the median areolets of the prothorax the front ones are about two-thirds the length of the hind one. The short costae dividing off the elytral punctures are often transversely Y-shaped, and from some directions the rows in places appear to be in single instead of double series; but when the elytra are so placed that the thinner parts appear semitransparent, the punctures appear to be in quite regular double rows.

METRIORRHYNCHUS RUFOMARGINATUS, n. sp.

♂. Black; tips of elytra, each lateral costa, and part of suture bright red.

Head with rostrum very short. Antennae moderately long, third to tenth joints strongly serrated or subpectinated. *Prothorax* moderately transverse, apex obtusely produced in middle, sides moderately dilated and rather strongly elevated from middle to base, front angles obtuse, hind ones (except for a slight rounding off) almost square; conspicuously seven-areolate, the median areolet produced in front to about the middle of the medio-frontal areolets. Tips of *scutellum* produced. *Elytra* slightly dilated posteriorly; with irregular double series of large punctures, alternate interstices slightly elevated. Length (♂, ♀), 13-17 mm.

♀. Differs in having the antennae shorter and less strongly serrated (not subpectinated), abdomen wider, the subapical segment not notched, and legs slightly shorter.

Hab.—Victoria: Lorne (F. E. Wilson). Type, I. 12273.

The red tips to the elytra extend for from three to seven punctures in length; on the male the suture is red for almost half its length, on the female for scarcely one-fourth; on the male the middle of the apex of the prothorax is slightly notched, on the female more conspicuously so, but the character is probably not dependable. In my table would be placed with *M. rufipennis*, and in fact the types look like large specimens of the variety *goryi* of that species, but they differ in having the prothorax more transverse, its sides more feebly incurved about middle, the antennal serrations different, and the tibiae thinner.

METRIORRHYNCHUS MODICUS, n. sp.

♂. Black; sides of prothorax and tips of elytra flavous.

Head with rostrum short (distinctly wider than long). Antennae moderately long, third to tenth joints strongly serrated. *Prothorax* moderately transverse; conspicuously seven-areolate; apex produced in middle, sides strongly elevated, especially behind middle; front and hind angles rounded off. *Elytra* slightly dilated posteriorly; with double rows of irregular punctures; alternate interstices moderately elevated. Length (♂, ♀), 8-10·5 mm.

♀. Differs in having somewhat shorter and less strongly serrated antennae, and subapical segment of abdomen not notched.

Hab.—New South Wales: Eden, in October (Dr. E. W. Ferguson and H. J. Carter). Type, I. 12274.

In some respects close to *M. eremitus*, with which it would be associated in my table, but elytra more dilated posteriorly, and with only about one-sixth pale at the tips; the pale portion, however, is slightly advanced on the sutural and lateral costae, the prothorax also is pale only on the sides.

METRIORRHYNCHUS COMPOSITUS, n. sp.

♂. Black; prothorax, scutellum, and three-fifths of base of elytra of a rather dingy flavous.

Head with rostrum very short. Antennae moderately long, acutely serrated. *Prothorax* along middle (owing to the obtusely produced apex) almost as long as wide, conspicuously seven-areolate, front angles obtuse, hind ones produced and acute, median areolet produced to beyond middle of medio-apical ones, these much smaller than latero-apical ones. *Elytra* thin and parallel-sided; with regular double rows of punctures, except about tips, the alternate interstices distinctly elevated. Length, 8·5 mm.

Hab.—Queensland: Coen River (H. J. Carter from H. Hacker). Type (unique) I. 11850.

On the type there is an infuscated stain at the inner corner of each of the latero-basal areolets, and the scutellum is also infuscated towards the base. In my table would be placed with *M. posticalis*, but the frontal areolets are very different, and the antennae are non-ramose; regarding the dark parts of the prothorax as more than stains it would be placed with *M. marginipennis* and *M. eremitus*, whose pale elytral markings are longitudinal.

METRIORRHYNCHUS CRASSIPES, n. sp.

♂. Black and flavous.

Head with very short rostrum. Antennae rather short and wide, third joint distinctly longer than fourth, and each feebly serrated, the others to tenth more strongly serrated and gradually decreasing in width, eleventh about one-half longer than tenth. *Prothorax* moderately transverse; conspicuously seven-areolate; apex obtusely produced in middle, sides narrowed to middle, front angles obtusely rounded, hind ones slightly rounded. *Elytra* rather thin; with double rows of somewhat irregular punctures, alternate interstices distinctly elevated. *Legs* rather stouter than usual. Length, 7-7·5 mm.

Hab.—North-western Australia: Forrest River, in February (J. Clark from W. Crawshaw); Northern Territory: Stapleton, in February (G. F. Hill, No. 54). Type, I. 11832.

The flavous parts are the prothorax, scutellum, elytra (except for rather more than the apical fourth), abdomen (three or four of the basal segments deeply infuscated or black), coxae and base of femora (more of the middle than of the hind ones, and less than of the front ones). In my table would be placed with *M. posticalis*, but the male of that species has flabellate antennae; in appearance the type is somewhat like a small specimen of *M. apicalis*, *M. abdominalis*, or *M. melaspis*, but its rostrum is short; many species of *Trichalus* are similarly coloured.

Var. (?) Another male, from the Forrest River, may belong to this species, but it differs from the others in having the prothorax with the sides almost parallel, its front margin semidouble (approaching that of *M. gracilis*), more than one-third of the elytra black on the sides, but the flavous part triangularly advanced at the suture, more of the hind femora pale, and the abdomen entirely black.

METRIORRHYNCHUS EUCERUS, n. sp.

♂. Flavous, head (partly or entirely), antennae (basal joints sometimes obscurely paler), palpi and apical fourth or fifth of elytra black, tarsi and metasternum more or less deeply infuscated.

Head with very short rostrum. Antennae with long rami. *Prothorax* moderately transverse; conspicuously seven-areolate; apex obtusely produced in middle, sides narrowed to middle, front angles obtuse, hind ones produced and acute, median areolet large, produced fairly close to apex. *Elytra* rather thin and parallel-sided; with double rows of regular punctures to near apex, the alternate interstices moderately elevated, but the same as the others on the dark portion. Length, 7-9 mm.

Hab.—Northern Territory: Darwin and Daly River (H. Wesselman). Type, I. 11828.

The ramus on the third joint of the antennae is about twice the length of its supporting portion, on the following ones, to tenth, it is longer (up to thrice the length of its support), the eleventh joint is about thrice the length of the non-ramose portion of the tenth; the lengths of the rami, however, vary slightly on the six specimens taken. In my table the species would be placed with *M. posticalis*, *M. gracilis*, and *M. fallax;* of these *gracilis* was described as having more of the under-surface and legs dark, and less of the elytra, and with very different prothoracic areolets, on the present species they are all well defined, and the central one is not confined to the basal half; *posticalis* has more of elytra and of under-surface dark, and the areolets different; *fallax* (of which I only know the females) has less of elytra and more of under-surface dark, and the areolets different.

METRIORRHYNCHUS TRICHOCERUS, n. sp.

♂. Flavous; head, antennae, palpi, apical third (or more) of elytra, abdomen, tarsi, and parts of tibiae black.

Head with rostrum very short. Antennae with long rami on third to tenth joints, the rami with moderately dense and rather long hairs, eleventh joint more than twice the length of the non-ramose part of tenth. *Prothorax* moderately transverse; conspicuously seven-areolate, apex obtusely produced, sides narrowed to middle; front angles obtuse, hind ones slightly produced and subacute, central areolet slightly produced between bases of medio-apical ones. *Elytra* thin and parallel-sided; with regular double rows of punctures, the alternate interstices moderately elevated. Length, 6-7·5 mm.

Hab.—Northern Territory: Melville Island (W. D. Dodd). Type, I. 11820.

All the rami are long, the shortest (on the third joint) being almost twice as long as its support. The species is allied to the preceding one, but the rami have conspicuous clothing, the abdomen is dark, and the metasternum pale (there are six of the preceding species and three of the present before me, and the differences noted are constant); in my table would be placed with *M. posticalis,* which has darker legs and under-surface, median areolet of prothorax longer, etc.

A female, from Stapleton (G. F. Hill), probably belongs to this species, its colours are as in the type, except that the basal joint of the antennae is obscurely pale (as it is also on one of the males); its antennae are shorter, rather wide, and the fourth to tenth joints are moderately serrated, the eleventh joint is almost twice the length of the tenth, the abdomen is wider, its subapical segment is not notched and the legs are shorter.

TRICHALUS INFAUSTUS, n. sp.

♂. Sooty-black; prothorax, and rather more than basal half of elytra of a dingy flavous.

Antennae moderately long, third to tenth joints strongly serrated. *Prothorax* slightly longer than apical width, sides considerably elevated near base, and somewhat sinuous, front angles rounded off, hind ones acute, central areolet continued to apical fifth and connected with apex by a short costa. *Elytra* rather thin, slightly narrowed in middle, subsutural costa trifurcate at basal fourth. Length, 9·5-10·5 mm.

Hab.—Queensland: Cairns district (A. M. Lea), Atherton (Dr. E. Mjoberg). Type, I. 12277.

In my table⁽⁶⁾ would be placed with *T. flavopictus*, which is a larger species, with wider prothorax, elytra more dilated posteriorly, and less of apex dark; the dark part is not sharply limited, but is continued almost to the middle as an infuscation; on both specimens before me there is an infuscated stain on the disc of the prothorax, and the scutellum is dark.

TRICHALUS QUADRICAVUS, n. sp.

♀. Black; prothorax, scutellum, basal four-fifths of elytra, front and middle coxae, and trochanters flavous.

Antennae rather long, third joint about twice as long as its apical width, and slightly longer than fourth, the others to tenth slightly decreasing in length and width but none transverse, eleventh about half as long again as tenth. *Prothorax* about as long as the apical width, front angles obtuse, hind ones acute; central areolet divided into two parts. *Elytra* parallel-sided to near apex, alternate interstices distinctly elevated, the subsutural one trifurcate at basal third. Length, 8 mm.

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(6) Lea, Trans. Ent. Soc. Lond., 1909, p. 90.

Hab.—Queensland: Cairns district (A. M. Lea). Type (unique), I. 11839.

One side of the prothorax of the type is gently incurved to the middle, but the other is slightly dilated there, this appears to be due to post-mortem contractions. The dark part of the elytra is slightly dilated on the sides. At first glance the type appears to be a specimen of *T. froggatti*, with more of the apex of elytra black than usual; but the doubling of the central areolet associates it with *T. insignis*, which is a much larger species, with part of the prothorax black, and the black markings of elytra longitudinal instead of apical; the basal portion of the central areolet is half the length of the segment, then there is a portion half its size, and a carina connects this with the apex.

DUMBRELLIA PILOSICORNIS, Lea.

Two males, from Melville Island, appear to belong to this species, but differ from the type in having more of the apex of the elytra black: on one specimen occupying about one-fourth of the elytra, on the other less about the suture, but as much near the sides; the prosternum and mesosternum are flavous, and the head is moderately infuscated instead of black; on one of them the head is flat between the eyes, on the other there is a depression there, although not as deep as on the type; the differences are probably due to contractions on drying.

DUMBRELLIA MELANCHOLICA, n. sp.

♀. Sooty-black; head and prothorax somewhat shining.

Head with a rather feeble median line, but ending in front in a small, deep fovea. Antennae rather long and thin, most of the joints cylindrical, second very small, third wider than fourth, but somewhat shorter, the following ones to tenth feebly decreasing in width, eleventh slightly longer than tenth. *Prothorax* about twice as wide as long, apex gently produced in middle, sides feebly increasing in width to base, front angles obtuse, hind ones produced and acute, a narrow deep transverse impression on each side of base, but isolated from a small medio-basal impression; with rather large submarginal punctures at sides and apex. *Elytra* thin and parallel-sided; with almost regular rows of rather large, rounded punctures. Length, 5·25 mm.

Hab.—Queensland: Cairns district (A. M. Lea). Type (unique), I. 11843.

Readily distinguished from the two previously described species by its entirely dark upper-surface; the deep median line of the prothorax of these species is represented on the present one by a basal fovea only.

Calochromus guerini, Macl.

Two specimens, from Cairns, differ from the typical form of this species in having the prothorax red, except for a narrow dark median line; another, from Dorrigo, has the prothorax normally coloured, but the elytra entirely red.

Calochromus insidiator, Fairm.

A male, from the Tasmanian Lakes, and three others, from Ulverstone, have a blackish triangle about the scutellum, and so, at first glance, appear to belong to *C. scutellaris*, but the head is unarmed.

Calochromus amabilis, Lea.

Three males, without exact locality labels, from the Blackburn collection, probably belong to this species; they have the punctures about the tips of the elytra decidedly coarser than elsewhere, and similarly thick antennae to those of the types, the apical marking, however, is briefly transversely-elliptic, instead of slightly advanced along the suture, and concave between the suture and each side. The antennae are decidedly shorter and thicker than those of the male of *C. basalis*, but the elytral interstices are intermediate between those of that species and *amabilis*.

Calochromus denticulatus, n. sp.

♂. Blackish-purple; prothorax, scutellum, and elytra (except apical sixth) lemon-yellow.

Head with a flange-like process overhanging and concealing labrum; a narrow median line at base, ending between antennae in a small, deep fovea. Antennae long and thin, first joint stout, second very small, third wider and shorter than fourth, the others to tenth subequal in length, and very feebly decreasing in width, eleventh slightly longer than tenth. *Prothorax* almost twice as wide as long, a large sinuous depression near each side, and a narrow one along middle. *Elytra* almost parallel-sided; punctate-striate, punctures partially concealed by pubescence, but becoming more distinct about apex, where the striae vanish; alternate interstices somewhat elevated above their fellows. Front *femora* rather stout; with two rows (two or three in each row) of small teeth, or acute granules, on under-surface near apex; front tibiae denticulate on lower-surface. Length, 12 mm.

Hab.—Queensland: Coen River (W. D. Dodd). Type, I. 11840.

The head has a curious process that projects in front so that the labrum is concealed from above, its front angles are rectangular, but the middle is slightly produced, from the sides it resembles a thin flange, it is not an acute process such as in *C. scutellaris*, so I regard the head as unarmed, and so regarding it the species would be associated with *C. guerini*, in which the process is ridged along the middle in the male; the antennae are slightly longer (13 mm.) than the body. It belongs to Waterhouse's second section of the genus.

A specimen from New South Wales (Wentworth Falls, H. J. Carter), possibly belongs to this species, but has the dark part of the elytra advanced to the basal fourth, the front femora with more numerous teeth (seven on one of the rows), and the dentition of the front tibiae inconspicuous. Another specimen, from the Madang district of New Guinea, possibly also belongs to the species, but the dark part of the elytra has a deep metallic-green gloss, and leaves only the basal fifth pale, the denticulation of its front legs is as on the Wentworth Falls specimen.

LUCIOLA COWLEYI, Blackb.

Some years ago I received from the late Rev. T. Blackburn a specimen bearing his name—label "*Luciola cowleyi*, Blackb.," but without a locality label; this specimen agrees well with the description, except that parts of two abdominal segments are white; whereas in the description only the penultimate segment was noted as white; on some specimens with the apical segment contracted, however, its white part is scarcely distinct from that of the preceding segment, so that possibly he was misled, or the type may have been a female (unknown to me) with really only one segment white. There are numerous males in the Museum, from the Northern Territory, that agree with the specimen above noted, and all of them have the white of the abdomen confined to the lower-surface; the dark parts of the elytra vary somewhat in intensity of colour, and on some specimens only a small part of the base of each could be regarded as blackish.

LUCIOLA FLAVICOLLIS, Macl.

A specimen, from Normanton, possibly represents a variety of this species; it is larger (6·5 mm.) than usual, and the suture is as widely pale as the sides, but the black covers the whole of the tips; three apical segments of the abdomen are pale, but the two apical ones are more flavous than the other, which is almost white, the apex of the subapical segment is gently but distinctly incurved to the middle, much as in females of *L. humilis*, and *A. lychnus*, but less strongly than in the females of *L. platygaster*, and *L. complicata*, and the femora are entirely pale. The apex of its prothorax is feebly produced as on females of other species, and the head is only feebly concave. On normal specimens of *flavicollis* the third segment from the apex of the abdomen is entirely white on both sexes, the two apical ones are dark on the female, and the subapical one has a large, white, medio-basal patch on the male.

LUCIOLA DEJEANI, Gemm.

L. apicalis, Boi., n. pr.

♂. Flavous; head, antennae, palpi, a spot at apex of each elytron, part of third segment of abdomen, tarsi, and tips of tibiae, black or infuscated; two apical segments of abdomen white.

Head concave, shining, and with small punctures between eyes. Antennae with third joint slightly longer than fourth. *Prothorax* about twice as wide as long, depressed near margins, median line distinct; punctures dense. *Elytra* subparallel-sided to near apex, with feeble remnants of discal costae; punctures small and crowded, but sharply defined. Length, 8 mm.

Hab.—Probably Northern Territory.

The abdomen appears to be composed of two pale segments, then an infuscated one, then a white one similar in shape to the third, then a long white one with its tip rounded (it is possible, however, that there is a very small white one, inconspicuously attached to the tip of the fifth, and obscured by pubescence).

There are before me two species, either of which may be *dejeani* (or possibly neither), the original description is "Lutea, capite nigro; elytris apice nigris; subtus lutea." With a translation into French. The locality was New Holland. But of these two species the one described above (without locality label but probably from Darwin) bears Blackburn's name-label "Luciola dejeani Gemming," and as less of its under-surface is dark than on the other (described below) I shall presume that it is correctly identified (7); it is somewhat smaller and narrower than the specimen in the Australian Museum identified by Olliff as *dejeani*, but appears to belong to the same species.

LUCIOLA COSTATA, n. sp.

♂. Flavous; head, antennae, palpi, about one-fourth of apex of elytra (less on suture and sides), two segments of

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(7) The type is probably in the Paris Museum.

abdomen, tarsi and tibiae (except at base), black or blackish; two apical segments of abdomen white.

Head concave and with dense punctures. Antennae with third joint slightly longer than fourth. *Prothorax* about twice as wide as long, with irregular submarginal depressions, median line distinct; punctures of moderate size, crowded, and somewhat asperate. *Elytra* rather wide, subparallel-sided to near apex; each with four discal costae, of which the inner two are conspicuous, commence at the base and terminate on the black portion, the other two are feeble, commence at the basal third, and terminate just inside the black portion; punctures dense and sharply defined, but rather small. Length, 8·5-9 mm.

Hab.—Northern Territory: Flora River (Prof. Baldwin Spencer). Type, in National Museum; cotype, I. 12280, in South Australian Museum.

Of the abdominal segments the first is scarcely darker than the sterna, the second is deeply infuscated, third black, fourth white and slightly shorter than third, fifth white and almost thrice as long as fourth, owing to an obtuse extension of its apex. On the type the apex of the prothorax is produced in the form of a distinct (although very wide) triangle, on a second specimen it is scarcely produced there; the difference is probably due to post-mortem contractions. This species can hardly be the one identified by Olliff as probably *L. dejeani*, as each elytron has four discal costae of which the inner two are very distinct (quite as distinct as the sutural thickening), the tibiae are pale only at the base, and two of the abdominal segments are dark, whereas on the preceding species (assumed to be *dejeani*), the discal costae are all very feeble, tibiae dark only at apex, and only one segment of abdomen dark.

LUCIOLA COMPLICATA, n. sp.

♂. Blackish; prothorax, scutellum, suture for a short distance near base, sterna, abdomen (except for two white segments), and legs (tarsi, front and middle tibiae infuscated) flavous.

Head concave, shining, and with minute punctures. Antennae with third joint produced on one side, and distinctly shorter than fourth. *Prothorax* almost twice as wide as long, depressed near margins, median line sharply defined; with fairly dense and sharply defined punctures. *Elytra* parallel-sided to near apex, with vague remnants of discal costae; punctures crowded and rather small, but sharply defined. Hind *femora* stouter than the others and somewhat curved; hind tibiae curved at base and stouter than the others. Length (♂, ♀), 5·5-7 mm.

♀. Differs in having smaller and less concave head, eyes smaller, third joint of antennae scarcely shorter than fourth and of the same shape, hind legs thinner and less curved, and in the abdomen.

Hab.—Queensland: Coen River (W. D. Dodd). Type, I. 11844.

On two males the basal segments of abdomen are small and shrivelled, the two following ones are large and entirely white, the second of these has its tip sinuous and a flavous subconical process on each side, beyond this the segments are depressed, with a large circular cavity on each side, bounded posteriorly by a shining ring-like elevation; the tip is deeply notched, with a small conical lobe (probably the tip of the sixth or seventh segment) in the notch; on the female only one segment is white, the next one is flavous, and rather widely incurved to the middle of the apex, with the following segment moderately long and also flavous. It is allied to *L. platygaster*, but the male with curious circles below the second phosphorescent segment, and this with conical processes at the sides; the male is distinguished from the female of that species by its pale legs.

ATYPHELLA FLAMMANS, Oll.

A male, from Kuranda, differs from the typical form in having the dark parts of each elytron reduced to a mediobasal patch between the first and third discal costae, and a still smaller apical one.

TELEPHORUS PULCHELLUS, W. S. Macl.

Mr. H. J. Carter and I saw a dwarf form of this species in abundance on flowers on Cradle Mountain, and Mr. L. Rodway took similar specimens on the summit of Ben Lomond in Tasmania.

TELEPHORUS VIRIDIPENNIS, Macl.

Many specimens of this species have the prothorax immaculate, on others there is a spot varying from hardly more than a small infuscated stain to large, sharply defined and black, with a greenish gloss.

TELEPHORUS RUFIVENTRIS, Macl.

T. tepperi, Blackb.

The type and a co-type of *T. tepperi* are but slight varieties of *T. rufiventris*, and similarly coloured specimens occur in Queensland.

TELEPHORUS GRACILIPICTUS, Lea.

The female of this species differs from the male in having the head narrower across the eyes, less of the muzzle flavous, and the antennae and legs shorter.

TELEPHORUS APICICOLLIS, n. sp.

♂. Flavous, most of elytra and of abdomen black or infuscated. Rather densely clothed with short, ashen pubescence.

Head rather wide and flat, clypeus notched in middle; with very minute punctures, dense in places. Eyes rather large. Antennae long and thin, third joint slightly shorter and wider than fourth. *Prothorax* distinctly longer than wide, apex produced in an even curve over prothorax, and with distinct asperate punctures, elsewhere with very minute punctures; a large depression on each side near apex, and a shallow one in middle of base. *Elytra* long, thin, and almost parallel-sided; with dense and minute punctures, interspersed with numerous larger (but still small) asperate ones, sparser about base than elsewhere; with very feeble remnants of discal costae. Apical segment of *abdomen* deeply notched. *Legs* long and rather thin. Length, 8·5-9 mm.

Hab.—Northern Territory: Melville Island (W. D. Dodd and G. F. Hill), Bathurst Island (Hill). Type, I. 11855.

Allied to *T. macrops*,(8) but prothorax decidedly longer, and elytra, except for a small basal portion, deeply infuscated or black; in my table(9) it would be associated with *T. immaturus*, and *T. nigroterminalis*, to which, however, it is not very close. The produced part of the prothorax has a thin apical fringe, but it appears to be easily abraded. The flavous portion of the elytra is from about half to three-fourths the length of the prothorax; on the type it is narrowly continued along the sides and suture for a short distance; on a second specimen it is very narrowly continued almost to the apex; on a third specimen it is sharply limited near the base; the infuscation of the abdomen is less pronounced than that of the elytra.

SELENURUS ANNULATUS, Macl.

There are two forms of this species before me. On the first and evidently the typical one (as the flavous portion extends backwards along the suture, on several specimens in fact narrowly connected with the apex) the black basal marking on the elytra is completely isolated, as the flavous subbasal part is continued to the extreme margins. On the second form the subbasal flavous part is larger, but is not continued along the suture, and does not touch the sides near the base, although from above it appears to do so.

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(8) In the original description two figures (157 and 173) were quoted for this species in error.

(9) Lea, Trans. Ent. Soc. Lond., 1909, p. 113.

SELENURUS TENUIS, n. sp.

♂. Black; elytra with an obscure bluish or greenish gloss; prothorax flavous, with a small discal infuscation, parts of muzzle and tips of abdominal segments obscurely flavous. Clothed with short, ashen pubescence, and some longer, dark hairs.

Head rather elongate. Antennae moderately long and thin, third joint about half the length of the fourth. *Prothorax* subcylindrical, distinctly longer than wide, surface slightly uneven. *Elytra* slightly wider than prothorax, narrowed posteriorly, terminated long before apex of abdomen; granulate punctate, or with coarsely rugose punctures. *Legs* long and thin. Length (♂, ♀), 5-6 mm.

♀. Differs in having somewhat smaller head and shorter legs.

Hab.—South Australia: Lucindale (F. Secker). Type, I. 11853.

Allied to *S. sydneyanus*, but prothorax decidedly longer, elytra shorter and more coarsely sculptured, and antennae thicker; the prothorax is much the shape of that of *Telephorus kershawi*, but that species is without flight wings, whereas on this species they are present. The discal spot is at about the apical third and occupies about one-fourth the length of the prothorax, on one of the males, and on the two females before me; on a second male it is represented by two minute dots. The abdomen is badly shrivelled on all of them.

SELENURUS TENUICORNIS, n. sp.

♂. Black; elytra with an obscure olive-green gloss; part of muzzle, prothorax (except for a large discal blotch), scutellum, much of sterna, tips of most of the abdominal segments, coxae, basal half of femora, and base of tibiae flavous. With short, ashen pubescence.

Head rather wide; with large prominent eyes; sides thence strongly narrowed to base; with minute punctures. Antennae long and thin, third joint about half the length of fourth. *Prothorax* longer than wide, sides almost parallel, apex obtusely produced in middle, disc uneven. *Elytra* much wider than prothorax, much shorter than abdomen, strongly narrowed posteriorly, with a feeble and rather short discal costa on each; with dense and minute, rugulose punctures or shagreened. *Legs* long and thin. Length (♂, ♀), 6-9 mm.

♀. Differs in having somewhat smaller, but still very prominent eyes, and somewhat shorter antennae and legs.

Hab.—Queensland: Coen River (W. D. Dodd). Type, I. 12253.

Close to *S. sydneyanus*, but larger, antennae longer, elytra much less coarsely shagreened, scutellum flavous (instead of black), more of the legs flavous, and prothoracic blotch of different shape; the blotch is of irregular shape, slightly dilated in front and behind, and narrowly touches each side about the middle. The under-surface of several of the basal joints of antennae are obscurely pale. The types are fastened together, as they were taken *in cop.*, and their abdomens are greatly shrivelled.

SELENURUS FLAVOINCLUSUS, n. sp.

♂. Black and flavous. Densely clothed with short pubescence, varying in colour with the derm.

Head rather wide across eyes, strongly narrowed to base; with dense and minute punctures. Antennae long and thin, third joint about half the length of fourth. *Prothorax* considerably longer than wide, disc uneven, sides and suture thickened, apex produced over base of head; punctures very minute. *Elytra* much wider than prothorax, long, thin, and regularly decreasing in width posteriorly, with tips diverging from suture; with dense and fine rugulose punctures or shagreened. Subapical segment of *abdomen* semicircularly incised. *Legs* long and thin. Length, 10-13 mm.

Hab.—Queensland: Cairns district (E. Allen and F. P. Dodd). Type, I. 11852.

The pale parts are portion of the muzzle, prothorax, scutellum, elytra (base suture and sides narrowly black, but tips entirely pale), parts of sterna, tips of abdominal segments, basal half of femora, and extreme base of tibiae. The pale tips of the elytra associate the species with *S. annulatus*, from which it differs in being larger, elytra longer, with the flavous portion of each considerably longer, only just interrupted before the apex, instead of separated from the tips by a wide black band, the suture also is dark from the base to just before the tips, so that the flavous portion is separately enclosed on each elytron; on *annulatus* the larger flavous portion is continuous across the suture;

more of the legs are dark and the prothorax is immaculate. On two of the specimens the abdominal notch is double, but this appears to be due to post-mortem contraction.

HETEROMASTIX.

The species of this genus usually have the elytra black, prothorax flavous, and head, legs, and antennae varying from partly to entirely black or flavous; the females as a rule are difficult to distinguish, *inter se*, and those of many species have not been described; but the males usually have distinctive antennae, the eleventh joint being often of remarkable shape, the tenth also is frequently peculiar. It is probable that the genus *Astychina* (10) will be found to be closely allied to, if not actually forming a section of it, the two apical joints of the antennae of *A. flavicollis*, *A. moerens*, and *A. funebris* differ quite as much from each other as do some species of *Heteromastix* with those joints distorted. So many species have been added since my table of the genus was published (11) that the following grouping should be of use:—

Antennae with third to fifth joints distorted in male.

DISTORTUS, Lea
INFLATUS, Lea

Antennae with ninth joint conspicuously dilated in male.

FUSICORNIS, Blackb.
INSIGNICORNIS, Lea
MACLEAYI, Lea
MCDONALDI, Lea
NONARIUS, Lea

Antennae with eleventh joint (and usually the tenth) distorted in male.

BICOLOR, Bohem.
BISPINICORNIS, Lea
BRYANTI, Lea
CASTOR, Lea
CRASSICORNIS, Lea
DECIPIENS, Lea
DIORYCERUS, Lea
FLAVIFRONS, Lea
FLAVOTERMINALIS, Lea
FRATER, Lea
GAGATICEPS, Lea
GALEATUS, Blackb.
IMITATOR, Lea
LATICOLLIS, Lea
LONGICORNIS, Lea
LURIDICOLLIS, Macl.
MAJOR, Lea
MEDIOFUSCUS, Lea
MELANOCEPHALUS, Lea
MINOR, Lea
MIRABILIS, Lea
MIRUS, Lea
OBSCURIPES, Lea
OBSCURUS, Lea
PALLIPES, Lea
POLLUX, Lea
SCUTELLARIS, Lea
SPINICORNIS, Lea
TASMANIENSIS, Lea

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(10) Westwood, Trans. Ent. Soc. Lond., 1876, p. 494.

(11) Lea, *l.c.*, 1909, pp. 130-132.

Antennae with many joints distorted in male.

MIROCERUS, Lea

Antennae simple in both sexes.

A. Prothorax partly or entirely dark.

APICIFLAVUS, Lea
CRIBRIPENNIS, Lea
DISCOFLAVUS, Lea
FRAGILIS, Lea
GLABER, Lea
NIGER, Lea
PULCHRIPENNIS, Lea
TENUIS, Lea

B. Prothorax entirely pale.

a. Elytra partly or entirely pale.

DENTICOLLIS, Lea
DOLICOCEPHALUS, Lea
FLAVIPENNIS, Lea
NIGRICEPS, Lea
NIGRIVENTRIS, Lea
TIBIALIS, Lea

b. Elytra entirely dark.

AMABILIS, Lea
ANGUSTUS, Lea
ANTICUS, Blackb.
CASTIGATUS, Lea
COLLARIS, Lea
COMPAR, Lea
GENICULATUS, Lea
LATUS, Lea
MEGALOPS, Lea
NIGRIPES, Lea
OCCIDENTALIS, Lea
PAUXILLUS, Blackb.
PERABUNDANS, Lea
PUNCTICORNIS, Lea
PUSILLIOR, Lea
PUSILLUS, Bohem.
SERRATICORNIS, Lea
SIMPLEX, Lea
TARSALIS, Lea
TRICOLOR, Lea
VICTORIENSIS, Blackb.

HETEROMASTIX PUSILLUS, Bohem.

A specimen of this species, from Lucindale (South Australia) has a large, double, infuscate spot on the base of the prothorax.

HETEROMASTIX VICTORIENSIS, Blackb.

On the male of this species the ninth joint of the antennae is slightly longer and thicker than the eighth or tenth, and has a small fovea near its apex; Blackburn did not specially mention the ninth joint, and in fact its distinctive features could be easily overlooked, but they appear to connect the species with those having that joint conspicuously inflated (as in *H. mcdonaldi* and allied species) with those in which the antennae are simple in both sexes. Tasmanian specimens differ from mainland ones in having the knees no paler than the adjacent parts.

HETEROMASTIX TENUIS, Lea.

The female differs from the male in being somewhat shorter, antennae decidedly shorter, prothorax without a small subbasal notch on each side, and abdomen simple.

HETEROMASTIX MIRABILIS, Lea.

The female differs from the male in being somewhat smaller, antennae thinner and simple, legs shorter, and in the abdomen; it is in fact scarcely distinguishable from the females of many other species of the genus, although the male is one of the most distinct.

HETEROMASTIX MACLEAYI, Lea.

Three males from Northern Queensland (Innisfail and Cairns) appear to belong to this species, but differ somewhat from each other and from the description of the type. One in size and colour is like the type except that the four apical joints of its antennae are infuscated; the second is larger, 3 mm., and has the joints after the second infuscated, becoming almost black after the eighth, its elytra have the basal fifth flavous and sharply defined from the black; the third is still larger, 3·75 mm., and has the joints of the antennae, after the second, still darker, and slightly more of the elytra pale. A female, mounted with the second male, agrees well with it in colour and size, but has the antennae shorter (the three apical joints only about half the length of those in the male), with the ninth joint and the abdomen simple.

HETEROMASTIX DOLICOCEPHALUS, Lea.

On the male of this species the subapical segment of the abdomen is gently emarginate, the emargination becoming slightly stronger in the middle, not suddenly as in most males of the genus; the antennae are decidedly longer than in the female.

HETEROMASTIX AMABILIS, Lea.

Prior to being published this species was given the manuscript name of *elegans*, and was so noted in the table (12); afterwards the name was changed to *amabilis*, and unfortunately the necessary alteration was not made in the table.

HETEROMASTIX BRYANTI, Lea. Figs. 1-3.

As the terminal joints of the antennae were not figured at the time of the description of this species, views of them, from different directions, are given for comparison with those of other species.

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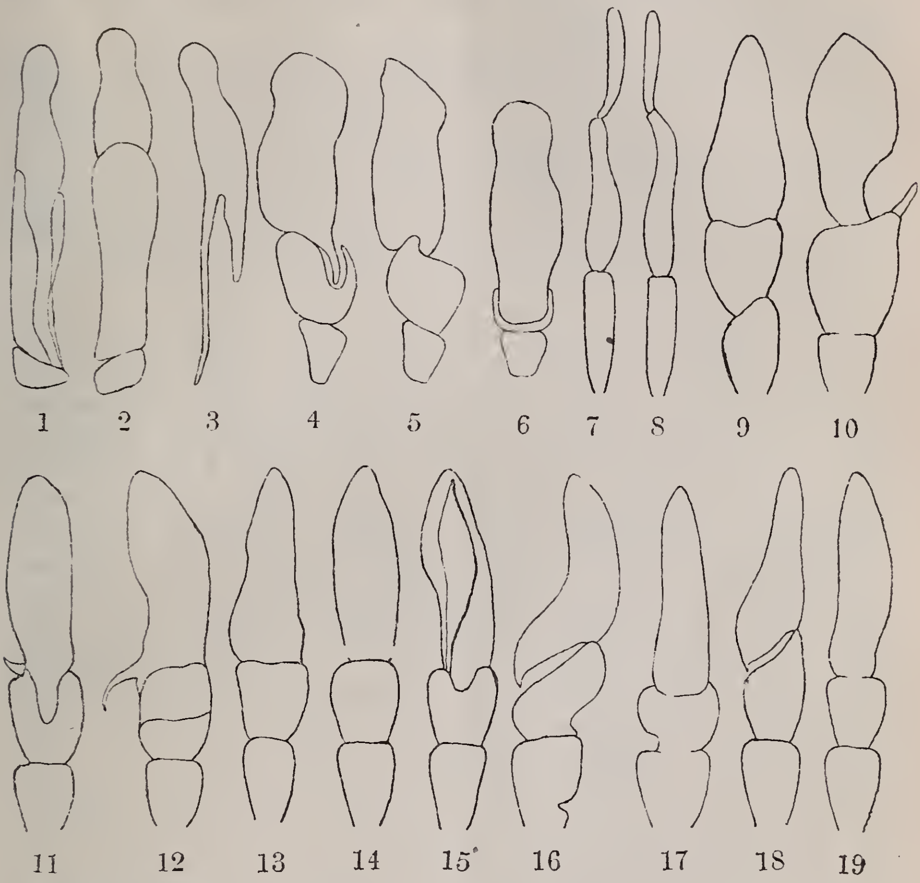
(12) Lea, Trans. Ent. Soc. Lond., 1909, p. 132.

HETEROMASTIX FLAVOTERMINALIS, Lea. Figs. 4-6.

Three figures of the terminal joints of antennae given for the same reason as those of the preceding species.



TERMINAL JOINTS OF ANTENNAE OF SPECIES OF HETEROMASTIX.
1-3, *H. bryanti;* 4-6, *H. flavoterminalis;* 7, 8, *H. longicornis;* 9, *H. mediofuscus;* 10-12, *H. bispinicornis;* 13-15, *H. major;* 16, 17, *H. obscuripes;* 18, 19, *H. tasmaniensis.*

HETEROMASTIX NONARIUS, n. sp.

♂. Black; head, prothorax, scutellum, mesosternum, legs, and basal joints of antennae flavous. Moderately pubescent.

Head gently convex, with small prominent eyes. Basal joint of antennae about as long as second and third combined, second to fifth moderately transverse, sixth to eighth strongly so, ninth large, about as long as four preceding ones combined, evenly dilated from base but more produced on inner side of apex than on outer side (tenth and eleventh joints missing). *Prothorax* almost twice as wide as long; with a few submarginal punctures. *Elytra* parallel-sided to near apex; with dense and small, but sharply defined punctures. Length, 3 mm.

Hab.—Northern Queensland (Blackburn's collection). Type (unique), I. 11859.

In my table would be associated with *H. fusiformis*, from which it differs in being smaller, legs entirely pale, antennae with third to eighth joints decidedly transverse, and the ninth larger and of different shape; it is also close to *H. insignicornis*, but the seventh and eighth joints of antennae are at least twice as wide as long, instead of slighty transverse, the third joint also is no larger than the second.

HETEROMASTIX LONGICORNIS, n. sp. Figs. 7, 8.

♂. Black and flavous. With dense, short pubescence.

Head gently convex, with two feeble interocular impressions. Antennae long and thin, fourth joint the length of first, slightly longer than third, and twice the length of second, the others somewhat longer, tenth and eleventh distorted. *Prothorax* twice as wide as long, margined throughout, the lateral margins slightly dilated and thickened near apex; with fairly large, submarginal punctures. *Elytra* long, thin, and almost parallel-sided to near apex; with dense and small punctures, many of which are sharply defined, but others transversely confluent. Subapical segment of *abdomen* triangularly notched in middle. *Legs* thin, but not very long Length, 3·5 mm.

Hab.—New South Wales: Dorrigo (W. Heron), Gosford (H. J. Carter). Type, I. 11863.

The antennae extend to the tips of the elytra, the distortion of the apical joints is very different from that of all other known species, the tenth is distinctly longer than the ninth and eleventh, and slightly thicker, from one direction it appears somewhat lopsided and from another sinuous, on top near the apex there is a shallow groove, as if for the partial reception of the eleventh; the latter is slightly longer than the ninth and strongly curved at the base. The pale parts are the head, prothorax, scutellum, a small part of base of elytra, and the sides to near apex (but the two colours not sharply limited), legs (parts of tarsi infuscated), and basal joints of antennae.

Two females, from Dorrigo, probably belong to this species, they differ from the males in having the head black, except for a variable portion of the muzzle, the scutellum black, the black of the elytra advanced to the base, except at the sides, where it is continued almost to the tips, antennae shorter, thinner, with simple joints, and abdomen not notched; on one of them its tip is flavous.

HETEROMASTIX MEDIOFUSCUS, n. sp. Fig. 9.

♂. Black; muzzle, prothorax, legs, two basal, and three apical joints of antennae flavous. With short and moderately dense pubescence.

Head shining, and with two feeble interocular depressions. Antennae moderately long, fifth and seventh joints slightly dilated on upper side, the sixth conspicuously dilated there, ninth joint longer than eighth, tenth and eleventh distorted, closely applied together, and about equal to the combined length of the seventh to ninth. *Prothorax* about twice as wide as long, sides slightly dilated and slightly thickened near apex. *Elytra* parallel-sided to near apex; with dense and small, but sharply defined punctures. Length, 3·5 mm.

Hab.—Queensland: Mount Tambourine (A. M. Lea). Type (unique), I. 11864.

Apart from the antennae I cannot distinguish this species from *H. bicolor*, but the sixth joint is conspicuously produced on one side, although from some directions it appears even smaller than the adjacent ones; in colour it also approaches *H. mirocerus*, but the fourth to sixth joints of antennae of that species are very different. The third to sixth joints are pale on the under-parts, and infuscated above, the three following joints are almost black, the eleventh is so closely applied to the tenth that it is difficult to distinguish its junction with that joint; it appears to be somewhat helmet-shaped, although not much like that of *H. gagaticeps*.

HETEROMASTIX BISPINICORNIS, n. sp. Figs. 10-12.

♂. Black; prothorax, parts of under-surface of head, legs (tarsi infuscated), and two or three basal joints of antennae flavous. With very short pubescence.

Head feebly impressed between eyes. Antennae moderately long, two apical joints distorted. *Prothorax* almost twice as wide as long, margined throughout, sides slightly dilated to near apex. *Elytra* parallel-sided to near apex; with dense and small, rugose punctures. Length (♂, ♀), 4-4·5 mm.

♀. Differs in having the head smaller, antennae shorter, thinner, and simple, and abdomen not notched.

Hab.—Queensland: Mount Tambourine (A. M. Lea). Type, I. 11865.

The tenth joint of antennae of the male is rather large, and grooved on one side for the partial reception of the eleventh, from one direction it appears to be divided into two, so that the antennae seem to be twelve-jointed; the eleventh is about the length of the three preceding combined, fairly stout on the apical half, and strongly narrowed (on one side) to the base, near the base there are two spines, a rather short outer one directed outwards and forwards (from some directions this appears to belong to the tenth joint), and a longer one on the lower side, directed downwards and backwards. The colours are as on many other species, but the armature of the eleventh joint distinguishes from them all.

HETEROMASTIX MAJOR, n. sp. Figs. 13-15.

♂. Black; prothorax, scutellum, labrum, parts of under-surface of head, and of three basal joints of antennae, knees and front coxae flavous. With very short pubescence.

Head shallowly depressed in front. Antennae rather long and not very thin, two apical joints distorted. *Prothorax* twice as wide as long, margined throughout, wider near apex than at base. *Elytra* parallel-sided to near apex; with dense and small, rugose punctures, coarser in middle than elsewhere. Subapical segment of *abdomen* deeply triangularly notched. Length, 6·5 mm.

Hab.—New South Wales (R. J. Burton). Type (unique), I. 12254.

The tenth joint of antennae is slightly shorter than the ninth, slightly wider at apex, somewhat lopsided, and with a notch at the apex on the under-surface; the eleventh is irregularly curved on one side, appears widest at base, and from another narrower than the tenth, and on its under-surface there is a long irregular groove; it has also a small basal spine invisible from most directions, and from some appearing to be attached to the tenth. Except for the labrum the upper-surface of the head is entirely black, and this with the pale scutellum associate the species in my table with *H. pallipes*, and *H. laticollis*, the former has legs almost entirely pale, and the latter with a greater portion dark, they have also different terminal joints; it is larger than any other species, having the elytra entirely dark and terminal joints distorted.

HETEROMASTIX OBSCURIPES, n. sp. Figs. 16, 17.

♂. Black; prothorax and parts of three basal joints of antennae flavous. With short, ashen pubescence.

Head with two small but distinct interocular impressions. Antennae moderately long and not very thin, three apical joints distorted. *Prothorax* about twice as wide as long, distinctly margined throughout. *Elytra* parallel-sided to near apex; with dense and small, but sharply defined punctures, becoming somewhat larger about middle. Length, 4 mm.

Hab.—Victoria: Dividing Range (Blackburn's collection). Type (unique), I. 11868.

The seventh and eighth joints of antennae are slightly incurved on one side, and outcurved on the other, the ninth has a narrow notch near the base (invisible from most directions, but very distinct from others), the tenth has its apical portion hollow, and conspicuously produced on one side, and a subbasal notch somewhat larger than on the ninth, the eleventh is about as long as the two preceding combined, with a spine on one side of base, and the middle strongly incurved on one side. There are two small, round foveae, on the disc of the pronotum of the type; they are quite symmetrical, but their presence is possibly due to postmortem contractions. No parts of the legs (except a small portion of the front coxae) are flavous, even the tibiae being deeply infuscated. In my table would be placed with *H. gagaticeps*, which has conspicuously bicoloured legs and very different antennae; it is closer to *H. laticollis* than to any other described species, but the scutellum is dark, the apical joint of the antennae is less strongly curved than on that species, but in much the same way.

HETEROMASTIX TASMANIENSIS, n. sp. Figs. 18, 19,

♂. Black; prothorax flavous, parts of three basal joints of antennae obscurely flavous. With rather dense pubescence.

Head with scarcely traceable frontal impressions. Antennae moderately long, third joint stouter than the others, tenth and eleventh distorted. *Prothorax* twice as wide as long, margined throughout. *Elytra* parallel-sided to near apex; with dense and small, sharply defined punctures, becoming larger about middle. Length, 3·25-3·5 mm.

Hab.—Tasmania: Cradle Mountain (H. J. Carter and A. M. Lea). Type, I. 12209.

The tenth joint of antennae on one side is slightly longer than the ninth, but on the other is conspicuously shorter, the eleventh has one side incurved towards the base, with the base itself on that side produced over the shorter side of the tenth, and with a small spine there. The abdominal notch is larger than usual. In my table would be placed with *H.*

gagaticeps, from which it differs in being smaller, legs entirely dark, darker basal joints of antennae, with apical joints different, and elytral punctures coarser; from the preceding species it differs also in being smaller, ninth and tenth joints not notched near base, the tenth longer on one side than the other, but not conspicuously produced there, and the eleventh less strongly incurved on one side. It is the only species known from Tasmania with the apical joints distorted.

HETEROMASTIX NIGRICEPS, n. sp.

♂. Black and flavous. With short, pale pubescence.

Head with two faint interocular impressions. Antennae rather long and thin. *Prothorax* about twice as wide as long, margined throughout, lateral margins somewhat wider and distinctly thickened near apex. *Elytra* parallel-sided to near apex; with dense and small, but sharply defined punctures, becoming very small at tips and base. Length (♂, ♀), 3·5-4 mm.

♀. Differs in having the head smaller, with smaller and less prominent eyes, and shorter antennae.

Hab.—Northern Queensland (Blackburn's collection), Cairns (Dr. E. W. Ferguson). Type, I. 12257.

The black parts are the head (except mentum), mesosternum, metasternum, and abdomen; on some specimens some of the antennal and tarsal joints, and the coxae, are rather lightly infuscated, on others the legs and antennae are entirely pale. On both sexes (there are two pairs taken *in cop.* before me) the abdomen is notched, but the notch is much larger on the male than on the female. In my table would be associated with *H. flavipennis*, but is a much smaller species, with finer punctures and prothoracic margins much as in *H. pusillus*, to which it is structurally closer.

HETEROMASTIX DENTICOLLIS, n. sp.

♂. Flavous; head, metasternum, and abdomen blackish, antennae (except some of the basal joints) deeply infuscated, middle and hind coxae, parts of femora and of tarsi rather lightly infuscated. With short, pale pubescence.

Head with two vague interocular impressions. Antennae long and thin. *Prothorax* at widest more than twice as wide as long, with fine margins, but each side suddenly and strongly dilated and thickened towards apex. *Elytra* long, thin, and almost parallel-sided to near apex; with dense and small, but sharply defined punctures. Length, 3-3·25 mm.

Hab.—Northern Queensland (Blackburn's collection). Type, I. 12261.

A narrow, fragile species, in many respects close to the preceding one, but at once distinguished by the lateral margins of the prothorax; these are suddenly and strongly dilated somewhat nearer the apex than base, so as to appear like a large obtuse tooth on each side; on the preceding species the margins are somewhat dilated near apex and thickened there, but the increase is neither sudden nor strong. A second specimen differs from the type in having the dark parts of the femora almost black.

HETEROMASTIX PULCHRIPENNIS, n. sp.

♂. Black; elytra deep purple. With short, dark pubescence.

Head with two small, transverse, interocular impressions. Antennae moderately thin, extending to about middle of elytra, second joint more than half the length of third, eleventh distinctly longer than tenth. *Prothorax* almost twice as wide as long, sides and base distinctly margined, the former almost parallel. *Elytra* parallel-sided to near apex; with dense and sharply defined punctures of moderate size. Length, 3 mm.

Hab.—Queensland: Coen River (W. D. Dodd). Type (unique), I. 11869.

In my table would be placed with *H. niger*, but the elytra are purple, prothorax more parallel-sided, and antennae no longer than in its female.

HETEROMASTIX FRAGILIS, n. sp.

♂. Dark piceous-brown, elytra, under-surface of head, legs, and three basal joints of antennae obscurely pale. With short, ashen pubescence.

Head vaguely impressed between eyes. *Antennae* long and thin, third joint twice the length of second, and slightly stouter than the following ones. *Prothorax* about twice as wide as long, hind angles widely rounded, sides slightly dilated to near apex, and somewhat thickened at widest part. *Elytra* long and thin; with dense, small, and somewhat rugulose punctures. Length, 2 mm.

Hab.—Northern Queensland (Blackburn's collection). Type, I. 11873.

A minute, dingy, fragile species. Its prothoracic margins are slightly paler than the disc, and so the species could hardly be referred to B or BB of my table, but regarding it as belonging to BBB of that table, it would be distinguished from the species placed there by its minute size; it is in fact smaller than any species noted in that table, but there are others equally small now before me.

HETEROMASTIX NIGRIVENTRIS, n. sp.

♂. Flavous; apical three-fifths of elytra, abdomen, and eight or nine apical joints of antennae black. With rather short, pale pubescence.

Head feebly impressed between eyes. Antennae moderately long and thin, third joint slightly stouter than the following ones. *Prothorax* about twice as wide as long, margined throughout, sides slightly dilated to near apex, and somewhat thickened near apex. *Elytra* slightly dilated beyond the middle; with dense and small, but sharply defined punctures. Length (♂, ♀), 2·5-3 mm.

♀. Differs in having the head smaller, eyes less prominent, antennae shorter, and in the abdomen.

Hab.—Northern Queensland (Blackburn's collection), Cairns (Dr. E. W. Ferguson). Type, I. 11871.

The black part of the elytra is somewhat rounded in front, so that the flavous portion is advanced along the sides to beyond the middle; on some specimens some of the antennal joints beyond the third are hardly more than infuscated. In my table the entirely pale prothorax and bicolorous elytra readily distinguish it from all species having simple antennae; structurally it approaches *H. pusillus;* the simple front legs readily distinguish it from *H. tibialis.*

HETEROMASTIX COMPAR, n. sp.

♂. Black; head, prothorax, scutellum, mesosternum, two basal joints of antennae, and knees flavous, rest of legs more or less deeply infuscated. With short, ashen pubescence.

Head with a narrow, oblique impression, on each side of middle in front. Antennae rather long and thin, tenth joint partly shining, and with a small fovea near apex. *Prothorax* less than twice as wide as long, margins rather wide at base and sides, and narrow across apex, sides widest but not thickened near apex; with distinct, submarginal punctures. *Elytra* parallel-sided to near apex; with dense and sharply defined punctures of moderate size. Length, 2·75-3 mm.

Hab.—Northern Queensland (Blackburn's collection), Kuranda (F. P. Dodd). Type, I. 11874.

The tenth joint of the antennae, on three males before me, has a small subapical fovea or puncture on a small shining place, on the type the joint itself is slightly longer and thicker than the eleventh; on the other males it is no thicker, and is slightly shorter than the eleventh; on two of them (including the type) the cephalic impressions are almost conjoined in front to form a V, on the other they are much less distinct. In my table would be placed with *H. anticus*, and *H. geniculatus*, from which it is readily distinguished by the tenth joint; from the former it is also distinguished by its smaller size and less conspicuously bicoloured legs, and from the latter also by only having two basal joints of antennae pale.

A female, mounted with one of the males by Mr. Blackburn, possibly belongs to the species, but has the head black, and differs in other (probably sexual) characters.

HETEROMASTIX ANGUSTUS, n. sp.

♂. Flavous; elytra, metasternum, abdomen, and antennae (three or four basal joints excepted) deeply infuscated. With short, ashen pubescence.

Head with two feeble interocular impressions. Antennae long and thin. *Prothorax* about twice as wide as long, base and apex finely margined, sides suddenly and strongly dilated, or obtusely dentate, rather nearer apex than base. *Elytra* long and thin; with small and crowded, somewhat rugose punctures. Length, 2·25-2·5 mm.

Hab.—Northern Queensland: Blackburn's collection. Type, I. 11879.

A thin, dingy species, structurally close to *H. denticollis*, but head and prothorax flavous; the sides of the prothorax are an exaggeration of those of *H. pusillus*, but the antennae are decidedly longer than in that species, the eyes are slightly larger, and the whole insect is smaller It is the smallest and thinnest of all the species having entirely dark elytra and pale head.

HETEROMASTIX COLLARIS, n. sp.

♂. Black; prothorax, part of under-surface of head, and front coxae flavous. Densely clothed with short pubescence.

Head gently depressed between eyes, with a slight longitudinal elevation near each antenna. Antennae long and rather thin, third joint stouter than the following ones. *Prothorax* less than twice as wide as long, margined throughout, sides slightly but regularly increasing in width from base to near apex, and then strongly rounded to apex itself, which is not quite as wide as base. *Elytra* almost parallel-sided to near apex; with crowded and small punctures (almost shagreened). Length (♂, ♀), 6-7 mm.

♀. Differs in having the head smaller, antennae about one-third shorter, and in the abdomen.

Hab.—Victoria: Dividing Range (Blackburn's collection), South Wandin (H. H. D. Griffith from E. Jarvis). Type, I. 12259.

The sides of the prothorax are much as those of *H. geniculatus;* but the head and knees are black; the sides are intermediate between those of the species of the *pauxillus* (F) and *pusillus* (FF) groups of my table, in *H. amabilis* the angulation is slightly more pronounced, the third and fourth joints of its antennae are thinner, and the knees are pale; *H. simplex* is smaller, with much shorter antennae, more distinct elytral punctures and pale knees; *H. pauxillus,* which it closely resembles in size and colour, has decidedly thinner antennae, and sides and front angles of prothorax different; there are a few submarginal punctures on the prothorax, but they are much less distinct than on *H. victoriensis,* which also has the sides of the prothorax evenly rounded, knees (on the typical form) paler than the adjacent parts, and elytral punctures much more sharply defined.

HETEROMASTIX SERRATICORNIS, n. sp.

♂. Black; prothorax, part of under-surface of head, two basal joints of antennae, and part of the third, and legs (tarsi and parts of tibiae infuscated) flavous. With short pubescence.

Head gently depressed in front. Antennae moderately long, rather thin, third to tenth joints slightly serrated on one side. *Prothorax* less than twice as wide as long, margined throughout, lateral margins slightly and evenly rounded and slightly thickened near apex; with submarginal punctures. *Elytra* slightly wider near apex than at base; with crowded and small rugose punctures. Length (♂, ♀), 4·5-6 mm.

♀. Differs in having the head smaller, antennae about one-third shorter and not serrated, prothorax with margins nowhere thickened, and in the abdomen.

Hab.—New South Wales: Brindabella (Blackburn's collection), Jindabyne, in January, and Sydney (H. J. Carter). Type, I. 11876.

On each of three males and five females the tips of the front tibiae, half of the middle and three-fourths of the hind ones are infuscated; on one of the males the base of the hind femora and hind coxae are infuscated, and on two of the females the middle and hind femora are deeply infuscated in parts. The serration of the antennae of the male is slight, but quite distinct from some directions; in *H. pauxillus* they are not serrated, on the female of the present species they are also not serrated, but they are scarcely half the length of those of that species, which is also narrower and with darker legs; *H. simplex* has shorter and non-serrated antennae, elytral punctures more distinct, and more of legs dark, the antennae of its female, however, are very similar. In appearance it is closest to *H. latus,* but is somewhat narrower, antennae longer and more strongly serrated in male, the terminal joint not constricted in middle, and more of the legs and less of the head pale.

LAIUS SINUS, Lea.

A specimen, from Gosford, the locality of the type, is evidently a female of this species, its apparent second joint (really the third) of antennae is much larger than is usual in females (but in this it resembles the female of *L. flavonotatus)* but much smaller than in the male and simple, from the male also it differs in having the following joint reddish, less of the muzzle reddish, the head with very small punctures, and the front tarsi and abdomen simple.

LAIUS FLAVIFRONS, Lea.

Two males, from Parachilna (South Australia), differ from the type in having two narrow dark lines extended in front from the dark interocular space, parts of the undersurface of the two basal joints of antennae (in error in the original description (13) the second joint was referred to as the "basal" one) and the legs entirely dark; the dark subapical markings of the elytra are also connected across the suture. One of the specimens has a black blotch, with a greenish gloss, occupying rather more than the median third of the prothorax, touching its base but not apex; this specimen at first glance somewhat resembles *L. nidicola*, *L. intermedius,* and *L. villosus,* all of which have much larger punctures on the elytra, and very different antennae.

LAIUS PALLIDUS, Lea.

A male, from Parachilna, with antennae identical with those of the type, has the dark part of the elytra not in the form of sharply limited spots, but more like a deep stain, irregularly occupying most of the basal two-thirds, with a whitish spot, completely isolated at the basal third, on each elytron; its scutellum is black.

LAIUS VERTICALIS, W. S. Macl.

A male of this species, from Wyndham (North-western Australia), is somewhat smaller than the females before me; the basal joint of its antennae is large, and with a process obliquely placed, so that from some directions the process itself appears narrow, parallel, and elevated at right angles from the mass of the joint, from other directions it appears to be subtriangular, with its hind part vertical, and front part curving to the apex, from other directions the whole joint appears like a thick, barbless hook; the apparent second joint is large, convex on the lower-surface, and irregularly concave on the upper; the second joint of its front tarsi is stout, and longer than the two following ones, which from some directions it entirely conceals, it is also tipped with black. It is certainly close to the male of *L. tarsalis*, but the head is without the interrupted ridge between the eyes which causes the head of that species, when viewed from behind, to appear conspicuously notched in the middle; the head of the present species, when so viewed, appears to have a gently even incurvature between the eyes.

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(13) Trans. Roy. Soc. S. Austr., 1917, p. 138, fourth line.

LAIUS CINCTUS, Redt.

A male, from Townsville, is much below the average size of this species, has shorter antennae (the three apical joints are notably stouter than on the typical form), and front femora pallid, but as the distorted joints of the antennae are almost exactly the same, and the front femora are foveate, it should probably be regarded only as a variety of the species.

LAIUS ARMICOLLIS, Lea.

A male of this species, from Sea Lake (Victoria), in Mr. Goudie's collection, has the pale parts almost scarlet, no doubt the normal colour of living specimens. Two females, from Leigh Creek (South Australia), evidently belong to the species; they differ from the male in having the head green, except for the flavous muzzle, and without excavations, the prothorax unarmed and immaculate, and the second joint of the front tarsi normal.

LAIUS EFFEMINATUS, n. sp.

♂. Metallic purplish-blue, prothorax, three spots on elytra, under-surface of basal joints of antennae, and part of abdomen reddish. With rather dense, erect, blackish hairs.

Head gently convex, with two feeble depressions in front; punctures small and sparse. Antennae obtusely serrated, apparent second joint simple, almost as long as two following combined. *Prothorax* widely transverse, sides strongly rounded, base feebly bilobed; with fairly large, scattered punctures, becoming numerous on sides. *Elytra* slightly dilated to near apex, sides and suture thickened; with crowded, rugose punctures, becoming sparser (but still dense) and more sharply defined near scutellum, and at apex. Front *femora* simple; second joint of front tarsi large, lopsided, partially concealing third and fourth, and with a black outer comb. Length (♂, ♀), 4-5·5 mm.

♀. Differs in having the head smoother in front, antennae slightly shorter and thinner, elytra more dilated posteriorly, and second joint of front tarsi similar to the third.

Hab.—Victoria: Melbourne, in September (F. E. Wilson); Geelong (H. W. Davey). Type, I. 12215.

One of the few species of the genus with antennae practically identical in the sexes. The pale markings of the elytra consist of a fairly large spot, common to both, at the apex, and a narrow spot on the middle of each side, varying from one-third to one-fifth the length of the elytra; but on one female the lateral spots are absent. The antennae, scutellum, under-surface, and legs are less blue than the head and elytra; they might be regarded as black, with a bluish gloss; on some specimens parts of the elytra have a slight greenish gloss. On each of the nine specimens examined the elytra do not quite cover the abdomen; on the male the tip of the latter is deeply notched, on the female it is but feebly notched.

LAIUS JANTHINIPENNIS, n. sp.

♂. Black with a purplish gloss, elytra deep purple, prothorax and parts of basal joints of antennae flavous. With sparse, ashen pubescence, and erect, dark hairs.

Head with a narrow curved line connecting bases of eyes, front shallowly depressed and subtriangular; with minute punctures. Antennae with first joint large, its inner apex produced into a truncated lamina, apparent second joint large, its lower-surface gently convex and irregularly four-sided, upper-surface irregularly concave and deeply notched to receive lamina of first joint, the following joints feebly serrated. *Prothorax* strongly transverse, sides strongly rounded, base gently bilobed, a wide shallow depression near base; sides with fairly numerous punctures, sparse elsewhere. *Elytra* parallel-sided to near apex, sides and suture thickened; basal sixth and apical third shining and with sparse punctures, the intervening space subopaque, and with crowded, rugose punctures. Second joint of front *tarsi* rather large and lopsided. Length, 3 mm.

Hab.—Queensland: Roma (Dr. E. W. Ferguson). Type, I. 12216.

A very distinct species of medium size, and the only one known to me having prothorax entirely pale, and elytra entirely dark. In some respects it is close to the description of *L. asperipennis*, but is smaller, prothorax immaculate, two joints of each antennae partly pale, and muzzle dark.

LAIUS INTRICATUS, n. sp.

♂. Black, in parts with a greenish or bluish gloss; elytra bright red, with purple markings, suture black, all margins of prothorax, parts of muzzle, and parts of basal joints of antennae reddish. With sparse, ashen pubescence, and erect, brownish hairs.

Head densely granulate-punctate. Antennae with first joint dilated and irregular at apex, apparent second large, lower-surface gently convex and lopsided, upper-surface with a large excavation near base, and a semi-double one near apex, following joints more or less distinctly serrated, apical one almost twice as long as the preceding one. *Prothorax* almost twice as wide as long, sides evenly rounded, irregularly depressed near base; margins with irregular punctures, small and sparse elsewhere. *Elytra* almost parallel-sided to near apex, sides and suture thickened; with crowded but sharply defined punctures in middle, becoming sparser about base and apex. Second joint of front *tarsi* rather large, lopsided, with a black outer comb. Length (♂, ♀), 4·5-5 mm.

♀. Differs in having the head smaller, with smaller punctures, basal joints of antennae entirely pale, the first about as long as in the male but only about half as thick at apex, the apparent second simple, about as long as two following combined, and second joint of front tarsi much the same as third.

Hab.—South Australia: Port Broughton (A. M. Lea), Fowler Bay (C. French). Type male, I. 11881, in South Australian Museum; type female, in National Museum.

A curiously marked species. The red of the elytra is brighter but otherwise almost as in *Novius cardinalis;* the purple part on each elytron is directed backwards from the shoulder, on the inner side curves round to the suture at the basal third, from the main portion is continued and at the apical third is directed on one side to the margin, along which it continues for a short distance, on the other side it turns round to meet a large, somewhat diamond-shaped mark on the suture, as a result (combined with the black suture) there are four isolated red patches on each elytron: a round one near the scutellum, an irregularly four-sided medio-sutural one, a large irregular apical one, and a narrow lateral strip on the basal half; the large dark part of the pronotum is gently incurved to the middle in front, dilated on each side, and bilobed at base.

LAIUS TRIFOVEICORNIS, n. sp.

♂. Dark purple, some parts blackish: prothorax, apex of elytra, basal joints of antennae, and most of legs flavous. With sparse, ashen pubescence, and long, dark hairs.

Head gently concave in front; with dense and small punctures. Antennae with first joint dilated at apex, apparent second very large, lower-surface gently convex, upper-surface with three irregular excavations. *Prothorax* strongly transverse, sides strongly rounded; with fairly dense punctures on sides, sparse elsewhere. *Elytra* almost parallel-sided to near apex, sides and suture slightly thickened, apex base and sides with rather small and rugose punctures, denser, larger, and more rugose elsewhere. Second joint of front *tarsi* lopsided, with a black outer comb. Length (♂, ♀), 2·75-3 mm.

♀. Differs in having the head smaller, apparent second joint of antennae simple, and second joint of front tarsi similar to the third.

Hab.—Australia (old collection); South Australia: Moonta (Blackburn's collection). Type, I. 7582.

The elytra are coloured almost as in *L. mirocerus*, but the two species have little else in common, from some directions they appear to be multigranulate. The pale apical portion occupies about one-fourth of the length at the suture, where it is longest, and then curves round to each side so as to resemble the figure 3, but it is very narrowly continued along each side almost to the base; the antennal joints, after the apparent second, are more or less infuscated.

LAIUS ALBOMACULATUS, n. sp.

♂. Black; parts of basal joints of antennae flavous, four large spots, and parts of extreme base of elytra, almost white. With fairly numerous, erect, dark hairs.

Head gently convex, with a small fovea in middle and two feeble depressions in front; with dense and sharply defined punctures. Antennae with first joint moderately long, the apparent second much larger, gently convex on lower-surface, irregularly concave on upper-surface, the outer front angle conspicuously produced, many of the following joints transverse. *Prothorax* widely transverse, apex much wider than base, a shallow depression near base; with dense and sharply defined punctures on sides, sparser elsewhere. *Elytra* with sides slightly dilated to near apex, sides and suture thickened; with dense and sharply defined punctures on most of the dark parts, sparser and smaller on the pale parts. Second joint of front *tarsi* lopsided, with a black outer comb. Length, 2·5 mm.

Hab.—South Australia: Tarcoola (A. M. Lea). Type (unique), I. 12217.

A small, very distinct, black and white species, in some respects like *L. flavonotatus*, but antennae of different shape and elytral spots and punctures very different. The pale basal parts of the elytra are normally concealed by the prothorax; two of the spots are at the basal third, and appear as parts of a fascia widely interrupted at the suture, and not touching the sides; the other spots are apical, and very narrowly separated by the suture.

LAIUS INCONSTANS, n. sp.

♂. Flavous and black or infuscated. Clothed with sparse, ashen pubescence, and a few longer hairs.

Head wide and gently convex; with dense sharply defined punctures. Antennae with basal joint fairly large, the apparent second much larger, gently convex on lower-surface, upper-surface with a curved ridge bounding two large unequal excavations, apical corners somewhat produced, many of the following joints slightly transverse. *Prothorax* about twice as wide as long, sides strongly rounded, a shallow depression near base; with fairly dense and rather sharply defined punctures on sides, sparse elsewhere. *Elytra* almost parallel-sided to near apex, sides and suture thickened; densely and irregularly granulate-punctate, the punctures smaller and sparser about base and tips than elsewhere. Second joint of front *tarsi* large, lopsided, and with a black outer comb. Length (♂, ♀), 2-2·75 mm.

♀. Differs in having the head smaller, the apparent second joint of antennae simple, and about as long as the two following combined, prothorax less transverse, and second joint of front tarsi simple.

Hab.—South Australia: Barton (A. M. Lea), Murray River (A. H. Elston and R. F. Kemp). Type, I. 12218.

In general appearance approaches the variety of *L. pallidus* described from Parachilna, but the antennae very different. Of the four specimens before me no two are exactly alike in colours. The type male has the head flavous, with the basal half slightly infuscated, the prothorax is almost black, with all the margins narrowly flavous, the scutellum is black, the elytra at the extreme base (normally concealed by the prothorax) are flavous, then there is a fairly wide blackish fascia touching the suture but not the sides, then a fairly wide, almost white one, touching the sides but not the suture, then a wider blackish one touching the sides, and narrowly interrupted at the suture, and then about the apical fourth is flavous; the tarsi and tip of antennae are also infuscated. A second male has the head entirely pale, the prothorax pale except for a large infuscated spot on each side, the dark parts of the elytra less blackish, and the pale fascia at the median third larger; most of the antennae and of the tibiae are also infuscated. The type female has the head, prothorax, scutellum, antennae (except the extreme tips), and legs flavous, with the dark basal fascia not much darker than the pale one following it, and the postmedian one hardly infuscated. On the second female the base of the head and part of the prothorax are vaguely infuscated, and the elytral markings are very obscurely defined, the infuscation of the legs is also slight. As with other males of the genus the apparent second joint of the antennae appears of different shape from almost every point of view.

HYPATTALUS PUNCTULATUS, Blackb.

Although *Hypattalus* was proposed by Blackburn on species that differed in their tarsi from typical species of the genus *Attalus*, and the male tarsi of the latter were commented upon, he did not denote the sex of either *H. punctulatus*, or *H. elegans* (described on the same page), and there were no particulars given (the legs, except as to their colour, were not mentioned in either description) that can be relied upon to determine the sex. When the major portion of his collection was acquired by the South Australian Museum there was one cotype of *punctulatus* in it, this specimen is a female. Two males, from Adelaide and Mount Lofty, belong to the species, and differ from the female in having part of the muzzle pale, the antennae longer and strongly serrated, and the hind tibiae thickened, and foveate in the middle of the outer side, with part of the foveated portion red. In the male of *H. elegans* the distorted portion is slightly nearer the base, and is not foveate externally. The two species are certainly distinct, but they both have decidedly blue elytra. Another male, from Victoria, however, has the elytra of such a deep purple as to be almost black.

HYPATTALUS SORDIDUS, Lea.

Of two specimens taken by Mr. F. E. Wilson, in Victoria, one has a dark median line on the prothorax and more of its sides dark than usual; the other has the prothorax entirely pale.

HYPATTALUS ALPHABETICUS, Lea.

Two specimens, sexes, from Parachilna (South Australia) probably belong to this species, but differ from the type in being considerably larger (♂, 2·75: ♀, 3 mm.), the dark parts of the elytra metallic-blue instead of violet, with the subapical spots more nearly circular, and touching the suture, the pale portion the same shade as the prothorax, instead of paler, the punctures across the middle fairly coarse, and the antennae (except the under-surface of some of the basal joints) deep black. The female differs from the type (also a female) in having the antennae decidedly shorter and stouter, the legs darker, with the hind ones black. The male has decidedly longer antennae than in the Parachilna female, of the same proportionate length as those of the type, but the serrations are stronger; its hind legs are missing, but the front and middle femora and tibiae are pale; the front femora are simple.

Hypattalus insularis, Lea.

A specimen, from the Dividing Range (Victoria), evidently belongs to this species, but has tibiae entirely dark; the prothorax is flavous with a large infuscate discal blotch, and its punctures are less distinct than on the types; the elytra have vague remnants of striation (as on the types). A specimen, from Sydney, has legs as in the type, but the prothorax entirely flavous.

Hypattalus flavoapicalis, n. sp.

♂. Black; tip of elytra, apical segment of abdomen, parts of under-surface of antennae, and of under-surface of muzzle, trochanters, and parts of coxae flavous. With sparse, short, ashen pubescence, and rather numerous erect, dark hairs.

Head moderately convex between eyes, with two shallow conjoined depressions in front; punctures rather sparse and minute, becoming denser at base. Antennae rather long, feebly serrated, seventh joint slightly longer than the adjacent ones, and the length of eleventh. *Prothorax* strongly transverse, sides (except in front) and base obliquely margined; with a few scattered punctures. *Elytra* parallel-sided to near apex, sides and suture slightly thickened, the apex more strongly so; with rather large, crowded, and sharply defined punctures. Apical segment of *abdomen* rather large. Hind *tibiae* moderately curved. Length (♂, ♀), 4-4·5 mm.

♀. Differs in having the head smaller, with shallower frontal depressions, antennae shorter and thinner, legs shorter, and apical segment of abdomen softer.

Hab.—Tasmania: Cradle Mountain (H. J. Carter and A. M. Lea), Waratah (Lea). Type, I. 12248.

In my table of the genus (14) would be associated with

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(14) Lea, Trans. Ent. Soc. Lond., 1909, p. 169.

H. exilis and *H. montanus*, but differs from each in the pale markings of elytra being confined to the apex. On the male the elytra have a faint greenish gloss; the apical segment of its abdomen is smooth and appears to be hard (as in the male of *H. apiciventris)*; on the female, although similarly coloured, it is irregularly wrinkled, as a result of post-mortem contractions. A single specimen was taken at each locality.

HYPATTALUS TRICOLOR, n. sp.

♂. Black; elytra violet-blue, their tips, prothorax, scutellum, and abdomen flavous; parts of legs and of basal joints of antennae obscurely diluted with red. Upper-surface almost glabrous.

Head with very feeble depressions in front; with sparse and minute punctures. Antennae moderately long, not very thin, obtusely serrated. *Prothorax* strongly transverse, sides and base thinly margined; almost impunctate. *Elytra* parallel-sided to near apex, sides and suture thickened, the apex still more so; with rather minute but sharply defined punctures, nowhere crowded, but in places rather numerous. Front *femora* moderately curved and edentate, but trochanter long, thin, and truncated, hind tibiae rather long and strongly curved. Length, 2·5 mm.

Hab.—Northern Queensland (Blackburn's collection). Type (unique), I. 11885.

The curvature of the front femora, with the very conspicuous front trochanters, associate this species with *H. australis* and its allies; the only one of these having similarly coloured elytra is *H. apicipennis*, which has elytral punctures crowded (although sharply defined) on most of its surface, very different to those on the present species, which also has the abdomen pale. There are several somewhat similarly coloured species *(H. viridis* and *H. violaceus)*, but with normal front legs in the male.

A female, from New South Wales (Blackburn's collection), probably belongs to this species, but has slightly larger elytral punctures (although nowhere crowded), its colours are exactly as in the type, from which it differs also in having antennae shorter, and front legs simple.

HYPATTALUS INCONSPICUUS, n. sp.

♂. Black, prothorax flavous; parts of four or five basal joints of antennae, trochanters, parts of coxae and parts of front and of middle tibiae obscurely flavous. With sparse, ashen pubescence.

Head with shallow depressions in front, and with rather sparse punctures. Antennae moderately long and obtusely serrated. *Prothorax* strongly transverse, sides and base with thin margins; sides with fairly distinct punctures, sparse elsewhere. *Elytra* with sides feebly dilated from near base to beyond the middle, sides and suture slightly thickened; with sharply defined and dense, but not crowded, punctures. *Legs* long and thin, hind tibiae rather strongly curved. Length, 1·75-2 mm.

♀. Differs in having the head slightly smaller, with thinner antennae, elytra slightly wider, legs slightly shorter, and in the tip of the abdomen.

Hab.—New South Wales: Blue Mountains (Dr. E. W. Ferguson). Type, I. 12220.

In appearance like small specimens of *H. calcaratus*, from which it differs in the thinner antennae, and hind tibiae of female not spurred; *H. abdominalis* is somewhat larger, elytra with smaller punctures, and antennae much shorter and distinctly serrated.

HYPATTALUS MINUTUS, n. sp.

Black; a small part of muzzle, basal parts of legs, and parts of basal joints of antennae obscurely testaceous. Upper-surface almost glabrous.

Head almost impunctate, an oblique depression each side in front. Antennae moderately long, thin, and obtusely serrated. *Prothorax* strongly transverse, sides and base finely margined; almost impunctate. *Elytra* rather distinctly dilated to near apex; with minute, rugulose punctures. *Legs* long and thin. Length, 1 mm.

Hab.—South Australia: Kangaroo Island (A. H. Elston). Type, I. 12219.

The smallest Australian species of the Malachiides, being only about half the bulk of *H. parvoniger*, its nearest ally. The tarsi are narrower than is usual in the genus, and the exoskeleton seems to be unusually soft; as a result the five specimens taken by Mr. Elston all differ in apparent shape, owing to post-mortem contractions.

CARPHURUS and BALANOPHORUS.

Owing to the fact that the females, as well as the males, of *Balanophorus* have a comb on the basal joint of the front tarsi, and that in *Carphurus* it is the males only that have such a comb, I was led astray, and described as male *Carphuri* specimens that were really female *Balanophori*. In my table (15) the species that need reconsideration in this respect are those referred to "G. Antennae subpectinate or very strongly serrate." Upon these the following comments are offered:—

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(15) Lea, Trans. Ent. Soc. Lond., 1909, pp. 188-191; in the table the top line of page 190 should have been *kk* not *nn* (to mate with *k* on page 189).

elegans, Lea. The comb on the front tarsus of each of the types is unusually long, and as the serrations of the antennae are rather less pronounced than in females of *Balanophorus* it was probably correctly referred to *Carphurus*.

longipes, Lea. The type is in the Macleay Museum, and I have not re-examined it.

variipennis, Lea. The type female is without combs, and so is a *Carphurus*, the serrations of the antennae of the male are very pronounced. A male in Mr. Carter's collection, from Stradbroke Island, has the middle femora entirely pale, and the hind ones dark only at the apical third; a female, in the Queensland Museum, has the elytra entirely pale.

lepidus, Lea. The type has combs and in appearance is very similar to a female of *B. scapulatus*, but its elytral punctures are denser and sharply defined, and hence it is probabaly a *Carphurus*.

maculiventris, Lea. The type is a female without combs, and so is a *Carphurus*.

apiciventris, Lea. The type of the species and a specimen of the variety *dubius* have combs, but until both sexes are known it is desirable to leave the species in *Carphurus*.

bifoveatus, Lea. Although in general appearance very close to *B. janthinipennis* the female is without combs and so is a *Carphurus*.

triimpressus, Lea. See note as *Balanophorus triimpressus*.

pictipes, Lea. Two females are combless, and so belong to *Carphurus*.

rhagonychinus, Fairm. See note as *B. rhagonychinus*.

simulator, Lea. The type has combs and is probably a female *Balanophorus*, as structurally it is very close to a female of *B. rhagonychinus*.

BALANOPHORUS BREVIPENNIS, Germ.

Two specimens, sexes, of this species in Mr. F. E. Wilson's collection, from Gisborne (Victoria), have the head entirely red.

BALANOPHORUS PICTUS, Lea.

A male, from Melville Island, in the National Museum, has the greater portion of the legs black, but otherwise agrees well with a cotype of this species. A specimen from the Forrest River (North Western Australia) is evidently a female of the species, its colours are much as in the male, except that the tip of the abdomen is black, that parts of the tibiae are infuscated, and that the blue of the elytra occupies more of the surface; the antennae are strongly serrated only.

BALANOPHORUS TRIIMPRESSUS, Lea (formerly CARPHURUS).

Deceived by its tarsal combs I described the type of this species as a male *Carphurus*, but Mr. F. E. Wilson has recently taken, at Ringwood in Victoria, a true male of the species, and it is a *Balanophorus*, with long rami on the antennae after the third joint. It has denser and smaller, but more sharply defined punctures on the elytra than on *B. janthinipennis*, from which, as also from *B. victoriensis*, it may be distinguished by the eyes being much larger; on the female they are as large as on the males of those species, and on the male about twice as large, being almost as large as on the male of *B. scapulatus*.

BALANOPHORUS RHAGONYCHINUS, Fairm. (formerly CARPHURUS).

This species is also a *Balanophorus*, its male having flabellate antennae much as in the above species, and in *B. scapulatus;* its eyes are much as in the latter species. In both sexes the femora and tibiae vary from entirely pale to entirely dark; on the female the femora are often infuscated in the middle, on one female the only dark part of the head is a conspicuous fascia connecting the eyes. Specimens before me are from Sydney, Blue Mountains, Eden, Kangaroo Valley, and Mittagong, in New South Wales; and near Brisbane, in Queensland.

BALANOPHORUS JANTHINIPENNIS, Fairm.

Two specimens, sexes, from Galston, differ from the typical form of this species in having the abdomen dark, except for the sides of the three basal segments, the elytra blackish-purple, and the second joint of antennae entirely pale; the elytral punctures are also smaller, although much more distinct than on *B. victoriensis*.

BALANOPHORUS CONCINNUS, n. sp.

♂. Flavous; elytra (except extreme base), and apical two-thirds of hind femora black, part of metasternum, eight apical joints of antennae, tarsi, and hind tibiae more or less deeply infuscated. With blackish hairs, denser on elytra, and longer on sides of abdomen, than elsewhere.

Head rather wide, a shallow depression each side in front; base punctate and transversely strigose. Each eye less than half the width of the inter-ocular space. Antennae with third joint acutely produced on one side, each of the seven following joints with a long ramus. *Prothorax* slightly longer than wide, sides gently rounded, a shallow depression near base. *Elytra* about twice as long as wide; with dense, small and distinct, but not very sharply defined punctures. Basal joint of front *tarsi* large, lopsided, partly concealing second joint, with a black comb from base to apex on inner side. Length, 6 mm.

Hab.—Queensland: Cairns district (F. P. Dodd). Type (unique), I. 11954.

About the size of the typical form of *B. scapulatus*, but with much smaller eyes than the male of that species, being only the size of those of its female (this character also distinguishes it from the description of *B. megalops).* In my table(16) it would be associated with *B. mastersi* and *B. pictus*, but is is much smaller and otherwise different from those species. The head and prothorax have a somewhat redder tone than the other pale parts; the pale portion of the elytra occupies hardly more than the slope adjacent to the prothorax.

CARPHURUS ARMIPENNIS, Fairm.

A male of this species, from Port Denison, has a wide space along the suture pale, and an obscurely pale latero-apical spot.

CARPHURUS PALLIDIFRONS, Lea.

A female, from Aspendale (Victoria), in Dr. Ferguson's collection, has the front tibiae and the tips of all the femora flavous. A male, from the Victorian Alps, in the National Museum, probably belongs to the species, but has a conspicuous curved red mark connecting the eyes.

CARPHURUS LONGICOLLIS, Lea.

A male, from Cairns, has the abdomen and tibiae entirely reddish.

CARPHURUS FRENCHI, Lea.

A female, from the Blue Mountains, in Dr. Ferguson's collection, has the pale basal markings of the elytra larger than usual, and the prothorax with an irregular, infuscate blotch.

CARPHURUS PUNCTATUS, Lea.

A specimen, from Launceston, has the prothorax with a large black spot on each side, much as on some varieties of *C. elongatus*, but the two species are otherwise very distinct.

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(16) Lea, Trans. Ent. Soc. Lond., 1909, p. 180.

CARPHURUS INVENUSTUS, Lea.

A male, from Illawarra, has parts of the elytra obscurely diluted with red.

CARPHURUS ALTERNIVENTRIS, Fairm.

Two females, from Cairns, in Dr. Ferguson's collection, have the legs almost entirely black and the head black, with an almost round, red spot, half-way between the base and apex. A male, from Gayndah, has a pale vitta on the side of each elytron, from the base to near the middle, touching the side at the base, but not at the middle; a female mounted with it (and a similar one from Cairns) has the vitta reduced to an isolated spot near the side, its head has a large circular red space, rendered rather conspicuous by the adjacent surface being infuscated.

CARPHURUS CRISTATIFRONS, Fairm.

A female, from Mount Tambourine, has a longitudinal black spot on the disc of the pronotum.

CARPHURUS ELONGATUS, Macl.

Of two males, from Aspendale (Victoria), in Dr. Ferguson's collection, one has the apical three-fifths of elytra black, except that the inner angle of each is obscurely diluted with red; its prothoracic spots are normal; the other has the prothorax immaculate, and the inner angles of the elytra no paler than the adjacent parts.

CARPHURUS GALLINACEUS, n. sp.

♂. Flavous; abdomen reddish-flavous; base of head, scutellum, mesosternum, metasternum, and coxae black; seven apical joints of antennae infuscated or black; labrum slightly infuscated. With sparse and very short pubescence in parts, and with long, straggling, dark hairs.

Head with a wide, semidouble excavation between eyes, and a smaller (but large one) on each side, each of the latter bounded inwards by a strong, curved elevation, the two elevations connected in front; base punctate and transversely strigose. Antennae moderately long, third to ninth joints serrated. *Prothorax* slightly longer than greatest width (near apex), sides evenly rounded, a wide shallow depression near base, and a shallower one near apex. *Elytra* about twice the length of prothorax and much wider than its base, each side near apex with a conspicuous notch, the margins of the notch thickened, its anterior end obtusely pointed, the posterior end armed with a flat, acute spine, directed forwards and outwards, each elytron near apex outwardly curved at suture; with dense and rather small, but sharply defined punctures. Basal joint of front *tarsi* with a small, black, inner comb. Length, 5 mm.

Hab.—Queensland: Bribie Island (A. M. Lea). Type (unique), I. 11941.

The crest on the head is even larger than on *C. cristatifrons*, and the ridges composing it curve round at the base, with the excavation behind them bisinuate, instead of single; the excavation at the side of each eye terminates before the posterior end of the eye, in *cristatifrons* (as viewed from the side) it is seen to slightly pass the eye; on the present species also there is a slight infuscation on each elytron near the suture, but the derm near the armature is immaculate.

CARPHURUS EXCISUS, n. sp.

♂. Black; head, except at base, prothorax, elytra about armature and on extreme sides, thence to base, but not to apex, tips and sides of abdominal segments, three basal joints of antennae, and parts of tibiae reddish-flavous. With long, dark hairs, and in parts with sparse, white pubescence.

Head with three rather large excavations: one in middle bounded on each side by a narrow ridge, and one on each side bounded by an eye; with irregularly distributed punctures, base transversely strigose. Antennae moderately long, third to tenth joints moderately serrated. *Prothorax* slightly longer than the greatest width (near middle), sides evenly rounded, a wide shallow depression near base; with a few scattered punctures. *Elytra* about twice the length of prothorax, each side near apex strongly notched, the part bounding the notch strongly thickened, its posterior end with a flat blunt-tipped process, directed outwards and forwards; with dense and rather sharply defined punctures, except on tips, which are strongly, separately rounded. Basal joint of front *tarsi* with a small, black, inner comb. Length, 4·25 mm.

Hab.—Victoria: Fern Tree Gully (F. E. Wilson). Type (unique), I. 11942.

Structurally close to *C. gallinaceus*, but crest of the head with its sides less distant at base, the excavation behind it not bisinuate, and the elytra, abdomen, and legs very differently coloured. The sculpture in general is near that of *C. cristatifrons*, but the inner part of the crest is different, and the elytra, etc., are differently coloured.

CARPHURUS BALTEATUS, n. sp.

♂. Flavous; elytra blackish, with a wide flavous fascia near base, and with an obtuse extension along suture, apical half or more of antennae and metasternum infuscated or black. With rather long, dark hairs, elytra with short, whitish pubescence.

Head with a large excavation between eyes, in its middle a ridge crowned by a golden fascicle diverging to each side; in front of the excavation a slightly hairy ridge, interrupted in middle, a large and rather shallow depression in front; with irregularly distributed punctures, base densely transversely strigose. Antennae moderately long, most of the joints serrated. *Prothorax* slightly longer than the greatest width, a wide shallow depression near base; with a few scattered punctures. *Elytra* about twice the length of prothorax, each side at basal third with an obtusely triangular projection; with dense and sharply defined punctures, becoming sparser on tips. Basal joint of front *tarsi* with a small, black, inner comb. Length, 6-7 mm.

Hab.—Northern Territory: Darwin (N. Davies and F. P. Dodd). Type, I. 11940.

The head when viewed from behind appears to have two tubercles, but these are less distinct than on *C. purpureipennis*, and the ridges giving rise to them are differently placed, the median fascicles are not black, as on *C. fasciculatus* and *C. uncinatus*, which also have the head differently sculptured. The head, when viewed from certain directions, appears to have a ridge from each side, not quite meeting in the middle, the point where they would have joined being overhung by the fascicles; in the male of *C. armipennis* the lateral ridges meet at the central one, which is not fasciculate in front, but some varieties of that species have a large part of the base of elytra pale. On one of the specimens the abdomen is entirely pale, and of a more reddish tone than the other, some of whose basal segments are slightly infuscated.

CARPHURUS MICROPTERUS, n. sp.

♂. Black, elytra and legs piceous-black. With sparse, whitish pubescence, and long, straggling, dark hairs.

Head wide; with dense and moderately coarse punctures. Antennae not very long, basal joint rather large and swollen at apex, second subglobular, third to ninth about as long as second, but becoming acutely triangular on one side, tenth and eleventh narrower, the eleventh scarcely longer than tenth. *Prothorax* distinctly transverse, sides rather strongly rounded, a narrowly impressed subbasal line; with numerous sharply defined, but not very large punctures. *Elytra* short, strongly narrowed posteriorly; with fairly dense asperate punctures. Tip of *abdomen* with a wide process on each side. Basal joint of front *tarsi* with a small comb on inner edge. Length, 3 mm.

Hab.—South Australia: Adelaide (Blackburn's collection). Type (unique), I. 11946.

A curious species that in some respects seems nearer *Helcogaster* than *Carphurus*, and for which possibly a new genus should have been proposed; the elytra are shorter than in any other species of the allied genera, being shorter than the head and prothorax combined, and shorter than their own basal width; the tip of the abdomen also is peculiar, in addition to the process on each side there is a pointed median one on the type (probably the tip of an oedeagus); most of the antennal joints have numerous rather long hairs.

CARPHURUS CRIBRATUS, n. sp.

♂. Black; front half of head, four basal joints of antennae, prothorax (except for a wide subapical fascia), basal two-fifths of elytra, tips and sides of subapical segment of abdomen distinctly, and of some of the others inconspicuously flavous; tibiae and most of tarsi flavous, or testaceo-flavous. With sparse, whitish pubescence, and long, dark hairs.

Head with small tubercles and depressions on front half; with small, dense punctures. Antennae rather long and thin. *Prothorax* about as long as the greatest width (near apex), an inconspicuous depression across base; with dense punctures, in places transversely confluent. *Elytra* more than twice the length of prothorax; with dense and sharply defined punctures, but some of them confluent. Basal joint of front *tarsi* with a black comb at inner apex. Length (♂, ♀), 3-3·5 mm.

♀. Differs in having the head smaller, less uneven, and with more distinct punctures in front, eyes smaller, antennae shorter, abdomen much wider, and front tarsi combless.

Hab.—Queensland: Bundaberg (Blackburn's collection). Type, I. 11948.

In my table (17) would be associated with *C. elongatus*, from which it differs in its coarser elytral punctures and sculpture of head. The fine pubescence on the prothorax, from some directions, causes the punctures to appear like strigae. On the male there is a scarcely traceable infuscation about the scutellum, but on the female it is more pronounced; the black prothoracic fascia is nearer the apex than base, but it varies in extent on the three specimens before me.

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(17) Lea, Trans. Ent. Soc. Lond., 1909, p. 188.

CARPHURUS INTEROCULARIS, n. sp.

♂. Flavous; elytra dark metallic-green; scutellum, metasternum, a basal portion of each segment of abdomen except the apical one (which is entirely pale), and hind trochanters black. With rather sparse, dark hairs, and in parts with sparse, whitish pubescence.

Head large; with a wide and deep inter-ocular excavation, its posterior end curved; a conspicuous inter-antennary tubercle projecting triangularly backwards into the middle of its anterior end; a deep oblique impression on each side close behind it; punctures irregularly distributed. Antennae long and rather thin, scarcely serrated, none of the joints transverse. *Prothorax* distinctly transverse, sides and base strongly rounded; with a few scattered punctures. *Elytra* more than twice the length of prothorax; with dense and, for the genus, rather large punctures, in places confluent. Basal joint of front *tarsi* lopsided, a black inner comb from base to apex. Length, 5 mm.

Hab.—South Australia. Type (unique), I. 11943.

In general appearance close to *C. cyaneipennis*, and with entirely pale antennae (the four basal joints are paler than the others, but these are not infuscated), but basal joint much thinner than on the male of that species, and the head strongly sculptured; its sculpture at once distinguishes the species from the males of *C. telephoroides*, *C. latipennis*, *C. cervicalis*, and other similarly coloured species. In my table it would be associated with *C. basiventris*, which has partly dark antennae and legs, differently coloured elytra, etc.

CARPHURUS TRICOLOR, n. sp.

♂. Black; head, four basal joints of antennae (except upper-surface of first), prothorax, and front femora flavous; elytra deep blue. With very sparse, pale pubescence, and moderately long, dark hairs.

Head with a somewhat circular depression, in the middle of which is a slight elevation; with rather dense and distinct punctures, the base transversely strigose. Antennae rather long and thin, only the second joint transverse. *Prothorax* longer than wide, base much narrower than apex, a wide depression near base; sides with dense punctures, sparse elsewhere. *Elytra* more than twice the length of prothorax; with dense and sharply defined punctures, even at apex. Length, 4-4·25 mm.

Hab.—Queensland: Cairns district (A. M. Lea). Type, I. 11945.

A beautiful little species; the type has the front femora pale, so in my table would be associated with *C. facialis*, from which it differs in the sharply defined punctures of elytra and in many details of colour, in particular the blue elytra and red head; regarding a second specimen (having somewhat infuscated front femora) as having entirely dark legs, it might be associated with *C. pallidifrons* (although the elytra are not metallic), from which it differs in its entirely pale head, sharper elytral punctures, etc. From the description of *C. azureipennis* it differs in the entirely black abdomen, black scutellum, front legs partly pale, and pale basal joints of antennae.

CARPHURUS SEMIRUFUS, n. sp.

♀. Black; head (except for a vague infuscation behind each eye), four basal joints of antennae, prothorax, tibiae, and tarsi reddish. With long, dark hairs, and sparse, pale pubescence.

Head gently convex between eyes, a shallow transverse impression in front; with minute punctures, becoming larger near eyes, base transversely strigose. Antennae moderately long, third to tenth joints rather strongly serrated, eleventh almost twice the length of tenth. *Prothorax* slightly transverse, sides strongly rounded, apex slightly wider than base; with a few scattered punctures. *Elytra* short, scarcely twice the length of prothorax; with fairly dense and rather sharply defined, but small punctures, becoming still smaller posteriorly. Length, 4 mm.

Hab.—Northern Territory: Melville Island (G. F. Hill, No. 351). Type (unique), I. 12201.

At first glance the type appears to be a *Helcogaster*, but the sharply defined elytral punctures, and serrations of antennae, should exclude it from that genus. Regarding the species as belonging to G of my table of *Carphurus*, it would be associated with *C. triimpressus*, which, with others of G, have been transferred to *Balanophorus* (the type has combless front tarsi so cannot belong to that genus); but regarding it as belonging to GG, it would go with *C. facialis*, which has elytra longer, more metallic, and with larger punctures, part of head black, etc.; the elytra are shorter and with less conspicuous punctures than in *C. basiventris*, the head is wider, and abdomen entirely black.

CARPHURUS COMPSUS, n. sp.

♂. Flavous; six apical joints of antennae and part of the preceding one, and a large blotch on elytra blackish. With fairly numerous dark hairs, and in places with very sparse, ashen pubescence.

Head moderately long, gently convex between eyes, a rather large shallow depression in front; with fairly distinct but irregularly distributed punctures, base transversely strigose. Antennae rather long, third to tenth joints strongly serrated, eleventh distinctly longer than tenth. *Prothorax* distinctly longer than wide, sides from near apex narrowed to base, a wide shallow depression near base; punctures sparsely distributed. *Elytra* more than twice the length of prothorax; with dense, small, and mostly rugulose punctures. Basal joint of front *tarsi* lopsided, with a narrow, black, inner comb. Length, 6 mm.

Hab.—Northern Queensland (Blackburn's collection). Type, I. 11952.

The dark blotch on the elytra is sharply defined, it commences on each elytron at the basal third, from the suture it is directed obliquely towards the shoulder for a short distance, is then directed backwards to slightly beyond the middle, and from there straight to the side, the derm thence being entirely dark. At first glance it looks like some of the varieties of *C. longus*, but the antennae are strongly serrated; the male of *C. elegans* has the basal joint of the front tarsi more than twice as long as in this species, abdomen tipped with black, etc.

A female, from Cairns (A. M. Lea), that possibly belongs to this species, differs from the type in having the head smaller, with two feeble depressions in front, antennae shorter, thinner, feebly serrated and entirely pale, elytra with the dark portion more diffused, and covering rather more than the apical half as an infuscation, with more sharply defined punctures, and legs shorter, with front tarsi combless.

CARPHURUS MACROPS, n. sp.

♂. Flavous; five apical joints of antennae, apical half of elytra, and most of abdomen infuscated. With straggling, dark hairs, and sparse, ashen pubescence.

Head gently convex between eyes, a feeble depression each side in front; with rather sparse punctures, becoming denser behind eyes, but base transversely confluent. Eyes large and prominent. Antennae rather long, third to tenth joints strongly serrated, eleventh about once and one-half the length of tenth. *Prothorax* longer than wide, sides diminishing from near apex to base, a wide shallow depression near base; a few punctures scattered about. *Elytra* scarcely twice the length of prothorax; with dense and small, but fairly sharply defined punctures. Basal joint of front *tarsi* with a narrow, black, inner comb, from base to apex. Length (♂, ♀), 4-4·5 mm.

♀. Differs in having the head smaller, with smaller (but still large) eyes, antennae shorter and thinner, and legs shorter, with simple tarsi.

Hab.—Queensland: Cairns district (A. M. Lea). Type, I. 11950.

The dark part of the elytra, although distinct, is not very sharply limited; on the two females taken, but not on the male, it is narrowly continued along the sides to the base, on one female the abdomen is entirely pale. In the male the combined width of the eyes is rather more than the space between them, in the female it is about three-fourths of that space; their length is slightly more than that of the two basal joints of antennae; they are as large as in *C. vigilans*, but the head is very differently sculptured. The antennae are rather strongly serrated, and so the species might be referred to G of my table, and there associated with the pale-headed form of *C. lepidus*, from which it differs in its much larger eyes, less defined elytral punctures, etc.; referring it to GG it would be associated with *C. atricapillis*, which is a considerably larger species, with very different antennae.

Carphurus latus, n. sp.

♂. Flavous; elytra deep purple, except at base and for a short distance along suture; eight apical joints of antennae, metasternum, parts of both surfaces of three basal segments of abdomen, middle coxae and femora, and most of hind legs, black or blackish. With long, straggling, blackish hairs, and sparse, ashen pubescence.

Head wide, somewhat uneven in front; with dense punctures near eyes. Antennae rather short and stout, third to tenth joints strongly serrated. *Prothorax* slightly longer than its greatest width (across apical third), a wide shallow depression near base; with small and very sparse punctures. *Elytra* about twice the length of prothorax, wide at base, sides suddenly dilated before the middle, and then feebly narrowed to apex; with fairly dense but uneven punctures. Basal joint of front *tarsi* lopsided, but not very large, with a small, black comb on inner edge. Length, 6·5 mm.

Hab.—North-western Australia: Wyndham, in March (J. Clark from W. Crawshaw). Type (unique), I. 11951.

An unusually wide species, at first glance appearing to belong to *Helcogaster;* but the elytra with distinct punctures, head not largely excavated and antennae serrate, are evidence that it should be referred to *Carphurus:* the appendix to each claw is larger than is usual in the allied genera. The eyes are large, and, when viewed from the side. appear to have no part of the head above them. The elytral punctures are often sharply defined, but are mostly rugose, some of them are so shallow as to be scarcely traceable, especially about the tips. The antennae are not subpectinate, so regarding the species as belonging to GG of my table it would be associated with *C. atricapillis*, from which it differs in most details of shape; if it were referred to *Helcogaster*, it would be associated with *H. punctipennis*, with which it has also few details in common.

NEOCARPHURUS COSTIPENNIS, n. sp.

♀. Black; antennae, except some of the apical joints, and extreme base of prothorax flavous. A few dark hairs scattered about.

Head opaque and with rather dense punctures, a shallow depression each side in front, and a shallow median line. Antennae moderately long, none of the joints transverse. *Prothorax* slightly longer than greatest width, which is at apex, sides rounded and strongly narrowed to near base, and then almost parallel to base, which is feebly bilobed, a deep, transverse, open depression near base. *Elytra* almost twice the length of prothorax, and twice as wide as its base, opaque and shagreened except about base, a fine costa extending obliquely inwards from each shoulder. Length, 2·5-2·75 mm.

Hab.—Northern Queensland (Blackburn's collection), Cairns (Dr. E. W. Ferguson). Type, I. 10948.

The opacity of the elytra appears to be due principally to very minute pubescence, but the species may be readily known from *N. pilosipennis*, *N. angustibasis*, and all others of the genus, by the costa running inwards from each shoulder for about one-third the length of the elytron. On the type the three apical joints of the antennae, and the upper-surface of the first, are infuscated; on a second specimen only the two apical joints are infuscated.

NEOCARPHURUS SEMIFLAVUS, n. sp.

Flavous; metasternum and abdomen black; apical three-fifths of elytra, parts of hind legs, of middle and of front tibiae and tarsi, and two apical joints of antennae, more or less deeply infuscated. With a few straggling hairs.

Head with a wide depression between eyes, and a large, obtuse, inter-antennary tubercle. Antennae moderately long, second to sixth joints transverse, eleventh longer than tenth. *Prothorax* longer than wide, sides rounded and strongly narrowed to near base, and then subparallel to base, which is feebly bilobed and about half the width of apex. *Elytra* about once and one-half the length of prothorax, and much wider than its base, the dark part opaque and very minutely pubescent. Front *tarsi* rather short, basal joint with an inner black comb. Length, 3 mm.

Hab.—New South Wales: Rydalmere (Dr. E. W. Ferguson). Type (unique), I. 11955.

The dark part of the elytra is opaque; on *N. coatesi* and *N. impunctatus* it is just as highly polished as the pale part. The eyes of the type are still of a vivid green.

HELCOGASTER.

A table of this genus, containing less than half of the now known species, was given in the 1909 revision of the family,(18) but the features by which the species are distinguished are so often on the head, and do not lend themselves readily to be condensed into brief tabular characters, that a grouping is now given, and only males are included, as it appears to be impossible to identify many of the females with certainty from descriptions. Some of the species, with the head comparatively simple in the male, might be regarded as belonging to *Carphurus*, but all such doubtful species have very minute rugulose punctures on the elytra, and the antennae feebly serrated at most. An asterisk (*) denotes that the species has been placed in its group by the published characters:—

1. Antennae with basal joints distinctive.

FOVEICORNIS, Lea
INSIGNICORNIS, Lea

2. Prothorax not simple near, or at, apex.

CAVICEPS, Lea
IMPERATOR, Lea
INCISICOLLIS, Lea
MEDIOAPICALIS, Lea
NIGRIVENTRIS, Lea
SPINICOLLIS, Lea

3. Basal joints of antennae not distinctive, and prothorax simple near, and at, apex.

A. Prothorax partly or entirely dark.

a. Elytra entirely dark.

ATER, Lea
ATERRIMUS, Lea
BASIRUFUS, Lea
CANALICULATUS, Lea
CAPSULIFER, Lea
COELOCEPHALUS, Lea
EFFEMINATUS, Lea
EXCAVIFRONS, Lea
GAGATINUS, Lea
GENICULATUS, Lea
HOPLOCEPHALUS, Lea
LITORALIS, Lea
MELAS, Lea
NIGER, Lea (typical)
OBLIQUICEPS, Lea
PARALLELUS, Lea
PULCHRIPES, Lea (variety)
PUNCTICEPS, Lea
RUFICORNIS, Lea
TRIANGULIFER, Lea (typical)

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(18) Lea, Trans. Ent. Soc. Lond., 1909, p. 215.

b. Elytra not entirely dark.

BASICOLLIS, Lea
BREVICORNIS, Lea
CRIBRICEPS, Lea
FASCIATUS, Lea (Note 1)
FLAVIPENNIS, Lea
INFLATUS, Lea
LATEROFUSCUS, Lea
MACULICEPS, Lea (variety)
MARGINICOLLIS, Lea
MEDIOFLAVUS, Lea
OPACICEPS, Lea

B. Prothorax entirely pale.

c. Elytra entirely dark.

APICICORNIS, Lea
ATRICEPS, Lea
BRACHYPTERUS, Bohem.
CARINATICEPS, Lea
CENTRALIS, Lea
CERATICEPS, Lea
CONCAVICEPS, Lea
DECIPIENS, Lea
FOVEICEPS, Lea (Note 2)
HACKERI, Lea
HELMSI, Lea
INSULARIS, Lea
MACROCEPHALUS, Lea
MAJOR, Lea
NIGER, Lea (variety)
*NIGRICEPS, Lea
OXYTELOIDES, Lea
PULCHRIPES, Lea (typical)
STRIGICEPS, Lea
TRIANGULIFER, Lea (variety)
TROPICUS, Lea
T. TUBERCULATUS, Lea
VARIUS NIGRIPENNIS, Lea
VENTRALIS, Lea

d. Elytra not entirely dark.

BACCHANALIS, Lea
BILOBUS, Lea
CONVEXICEPS, Lea
FUSCITARSIS, Lea (Note 3)
HUMERALIS, Lea
*IMPRESSIFRONS, Bohem.
LATICEPS, Lea
MACULICEPS, Lea (typical)
PALLIDUS, Lea
PIGNERATOR, Lea (Note 4)
PUNCTILOBUS, Lea
PUNCTIPENNIS, Lea
RHYTICEPHALUS, Lea
SEMINIGRIPENNIS, Lea
SIMPLICICEPS, Lea
SULCICEPS, Lea
THORACICUS, Lea
TRIFOVEICEPS, Lea
TRISINUATUS, Lea
TUBERCULIFRONS, Lea
VARIUS, Lea (typical)
VARIUS FLAVOPICTUS, Lea
VARIUS PALLIDIPENNIS, Lea

Note 1. The dark part of the prothorax of the type is possibly due to staining.

Note 2. On some males the sides of the prothorax have infuscated spots.

Note 3. The shoulders are not always conspicuously pale.

Note 4. The elytra of the type, from above, appear to be entirely dark.

Three species at present standing in *Carphurus* may eventually be transferred to *Helcogaster;* if so, their positions would be as follows:—*C. atronitens* in *a*, *C. basipennis* and *C. fasciipennis* in *d*.

HELCOGASTER GAGATINUS, Lea.

A female, from Melville Island, probably belongs to this species, but has the front femora black with a pale vitta, as on some males from New South Wales.

HELCOGASTER INSULARIS, Lea.

A male, from the Dividing Range (Victoria), has the projection between the basal sinuations of the head clothed with rusty red hair, resembling a short fascicle; on the types the hair there is black, and so hardly conspicuous.

HELCOGASTER PULCHRIPES, Lea.

A male, from Mount Lofty, differs from the type of this species in having all the legs, except the tarsi and coxae, reddish, only the extreme tip of antennae infuscated, and the prothorax with a conspicuous blackish spot on each side.

HELCOGASTER TUBERCULIFRONS, Lea.

On the male of this species the basal half of the head is usually deeply infuscated; on the females the infuscation of the head is more pronounced, the tubercle is reduced to a slight swelling on each side of the front of which is a shallow impression, the antennae are thinner, and the front tarsi are simple. Two females, from Dorrigo, sent with several typical ones, are rather larger than the others, and have the head deep black and highly polished, with only the lateral parts of the muzzle pale; a similar female, from the Tweed River, is in Mr. H. J. Carter's collection.

HELCOGASTER TROPICUS, Lea.

From some directions the wide median excavation on the head of the male, of this species, seems to be bounded near each eye by a subconical tubercle. The female differs from the male in having the head almost entirely black, without a large excavation, but shallowly bifoveate in front, the neck less strongly narrowed, and the basal joint of the front tarsi combless. On both sexes the legs, except for the knees, are usually entirely black.

The typical specimens were labelled, in the Macleay Museum, as from Cairns, but probably in error, as I have seen no other specimens of the species from Queensland, and it is abundant in the Mount Lofty Ranges, near Adelaide.

HELCOGASTER NIGER, Lea.

This species occurs in abundance in South Australia (Port Lincoln, Tumby Bay, Kangaroo Island, Adelaide, Mount

Lofty, Lucindale, and Mount Gambier). The head of the male, viewed from behind, appears to have three small median tubercles and a slightly larger one near each eye.(19) The typical, but not the commonest, form of the male is black, except that some of the basal joints of antennae and the knees are obscurely reddish or testaceous.

Var. 1, ♂. Prothorax with extreme base, and sometimes the sides near base, more or less reddish.

Var. 2, ♂. Prothorax with sides (or a vitta near each side) of prothorax pale, but not to apex, the pale portion usually not continued across middle of base. On some specimens of this form there is also a short, obscure, medio-apical vitta.

Var. 3, ♂. Prothorax with dark markings reduced to a median infuscated spot (usually rather large), and generally with infuscated stains about apex, or sides. On many specimens of this variety the large spot is obscurely connected with two small apical spots, so as to resemble an irregular Y, or the Y may be sharply defined.

The varieties run into each other, but I have seen only one in which the prothorax is entirely pale. In the commonest form of the female the base and sides near base of the prothorax are pale, but the various forms have not been described, as many of them are scarcely distinguishable from females of other species, although the males, by the sculpture of the head, are abundantly distinct.

HELCOGASTER T-TUBERCULATUS, Lea.

In the table(20) this was in error referred to as *tuberculatus.*

HELCOGASTER IMPERATOR, n. sp.

♂. Black; front half of head, prothorax, a large subtriangular portion at base of elytra (an infuscate blotch about scutellum excepted), and parts of legs and of antennae flavous, or reddish-flavous. With a few scattered dark hairs.

Head wide, with a rather shallow longitudinal impression each side in front. Antennae rather stout, second to tenth joints more or less transverse, eleventh slightly longer than wide. *Prothorax* considerably wider than long, widest close to apex, a deep transverse excavation near apex, and a shallow one near base. *Elytra* not much longer than wide, each separately rounded at apex; with sparse and inconspicuous, rugulose punctures. Basal joint of front *tarsi* with a distinct black comb. Length (♂, ♀), 2·5-4 mm.

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(19) Lea, Trans. Ent. Soc. Lond., 1909, pl. ii., fig. 9.

(20) *L.c.*, p. 216.

♀. Differs in having the head, except the labrum, entirely black, front femora, as well as the others, partly dark, antennae longer and thinner, none of the joints transverse, prothorax only slightly wider than long, apex very little wider than base, non-excavated or tuberculate, and front tarsi combless.

Hab.—South Australia: Adelaide (Blackburn's collection, H. H. D. Griffith, J. G. O. Tepper, N. B. Tindale, and A. Zietz), Mount Lofty (R. J. Burton, S. H. Curnow, A. H. Elston, A. M. Lea, and Tepper), Barossa (Elston), Quorn (Blackburn), Noarlunga (Burton). Type, I. 9185.

Some females were named as *H. basipennis* (Fairmaire) in Blackburn's collection, and in many respects they agree well with the description of that species; but it was described as from Peak Downs in Queensland, and there are so many other species from Queensland and New South Wales that the description would fit equally well, that I think this species (all the specimens of which before me are from South Australia) should not be regarded as *basipennis;* in any case the male of the present species has such a distinctive prothorax that it could hardly be confused with the male of any other species. The excavation of its prothorax varies somewhat, but it is always deep and wide, it is nearly always bounded at each end by a subconical tubercle, its front edge is often impressed in the middle, and has a feeble elevation on each side of the impression, and as all the elevations are setose the front margin, from some directions, appears quadrituberculate; the bottom of the excavation is usually infuscated or black. The impressions on the head of the male are so placed that from some directions the intervening space (appearing as a wide gentle elevation), and the lateral elevations, resemble the broad arrow. From three to five joints of his antennae are pale, on one specimen they are entirely pale; the hind femora are partly black or infuscated, and sometimes the middle ones as well; the apical joints of all the tarsi are infuscated. The true width of the elytra is very little less than that of the length, but owing to irregular contraction it often appears to be much less.

HELCOGASTER MEDIOAPICALIS, n. sp.

♂. Black and highly polished; prothorax (except middle of apex), front coxae and femora, and base of middle femora flavous. With very sparse, dark hairs.

Head wide, largely and irregularly excavated. Antennae moderately long, joints gradually decreasing in width, eleventh about once and one-half the length of tenth. *Prothorax* about as long as its greatest width, sides almost evenly rounded, middle of apex irregular. *Elytra* dilated from near base, each separately rounded at apex; with fairly numerous and small, but (for the genus) rather distinct, rugulose punctures. *Legs* rather long and thin, basal joint of front tarsi large, lopsided, and with a comb on the inner edge. Length, 3·5 mm.

Hab.—New South Wales: Blue Mountains (Blackburn's collection). Type (unique), I. 11915.

The prothorax not simple at apex associates this species in my table with *H. incisicollis* and *H. spinicollis;* the former has the prothorax black and deeply notched, the latter has the apex spined; on the present species there is a curved impression across the median apex, behind which the surface is elevated, and from some directions appears to project slightly forwards, but it is not spinose; the irregular part is darker than the rest of the prothorax; the general appearance and elytra are much as in *H. concaviceps.* The excavation on the head is transverse, and continuous from eye to eye, its hind margin is obtusely trisinuate, and front margin more sharply so, and it has a small tubercle in its middle not elevated above the level of the eyes; from some directions it appears to have several small tubercles. On the type the front tibiae and tarsi are infuscated, so that the tarsal comb (which on the males of most species show up as a distinct black inner rim) is inconspicuous, but under the microscope it is seen to be composed of about thirty long, close-set teeth.

HELCOGASTER LITORALIS, n. sp.

♂. Black; head (except base), most of prothorax, and basal third of antennae reddish-flavous. With sparse, dark hairs, elytra glabrous or almost so.

Head shallowly impressed on each side in front, towards base with a wide triangular elevation. Antennae moderately long, second to fifth joints slightly transverse, sixth to tenth slightly longer, eleventh longer than tenth. *Prothorax* slightly longer than wide, widest near apex, with a closed depression near base. *Elytra* moderately long; with sparse, inconspicuous punctures. Basal joint of front *tarsi* lopsided, and with an inner comb. Length (♂, ♀), 2·25-3 mm.

♀. Differs in having the head black almost to the muzzle, and without the triangular elevation, prothorax almost or entirely black, antennae somewhat thinner, and front tarsi combless.

Hab.—Lord Howe Island (A. M. Lea). Type, I. 11906.

In my table would be associated with *H. obliquiceps,* which has a very different head, in fact the head is very different from that of any other species; seen from behind its entire base appears to be triangularly elevated; it is transversely impressed at the extreme base, with the triangle overhanging it; even on the female there are traces of these. Twelve specimens were obtained on the island by the use of a sweep-net on grasses, etc., close to a beach; of these four are males, and the dark parts of the prothorax on each appear to be more of the nature of stains than regular markings, on three of them there is an irregular postmedian fascia, on the fourth there is only a small spot on each side; but the prothorax of the female is deep black, with the base usually, but not always, more or less reddish. On several specimens of each sex the knees are obscurely reddish.

HELCOGASTER MEDIOFLAVUS, n. sp.

♂. Black; middle portion of elytra obscurely pale flavous, three or four basal joints of antennae more or less flavous. A few blackish hairs scattered about.

Head with a rather shallow, inter-ocular impression; with three distinct costae in front, the median one shorter than the others. Antennae longer (passing elytra) and more distinctly serrated than usual in genus. *Prothorax* slightly transverse, sides evenly rounded, a wide transverse depression near base. *Elytra* moderately long, inconspicuously rugulose. *Abdomen* with a small medio-apical process. Basal joint of front *tarsi* lopsided, with an inner comb. Length, 2-2·5 mm.

Hab.—South Australia: Quorn (A. H. Elston), Murray Bridge (A. M. Lea). Type, I. 11899.

The bicoloured elytra and tricostate head render this species a very distinct one, and at once distinguish it from *H. obliquiceps* and *H. gagatinus*, with which it would be associated in my table. The dark parts of the elytra are a wide basal triangle, and the apical two-fifths, the pale intervening portion is distinct, but its outlines are not sharply defined. A specimen from the old collection, without exact locality, has the dark parts more brown than black, with the pale portion of the elytra more extended. There are five males before me, but I have been unable to associate any females with them.

HELCOGASTER OPACICEPS, n. sp.

♂. Black; elytra with median portion pale flavous, three basal joints of antennae, knees, front tibiae, and tarsi, more or less reddish-flavous. A few blackish hairs scattered about.

Head wide, opaque and densely punctate, a fairly large depression close to each eye, the two separated by an obtuse, shining ridge. Antennae moderately long and feebly serrated. *Prothorax* slightly transverse, sides evenly rounded, a wide transverse impression at base; a few punctures on sides. *Elytra* moderately long; with a few small, rugulose punctures. Basal joint of front *tarsi* lopsided, with a black inner comb. Length (♂, ♀), 2·75-3·25 mm.

♀. Differs in having the head narrower, the median ridge and lateral depressions much less distinct, antennae somewhat shorter and thinner, prothorax more transverse, and front tarsi combless.

Hab.—South Australia: Quorn (E. L. Savage), Tarcoola and Ooldea (A. M. Lea). Type, I. 12212.

Colours much as in the preceding species, from which it differs in being slightly wider, head opaque (except in front) and with dense punctures, instead of highly polished, and antennae somewhat shorter. On the only male before me the dark parts of the elytra are a large basal triangle, and the apical two-fifths; on one of the females the dark basal portion is extended, and the apical portion decreased; on the other female the dark parts are both somewhat extended and narrowly meet on the suture.

HELCOGASTER CRIBRICEPS, n. sp.

♂. Black; median portion of elytra flavous, four basal joints of antennae, tibiae and tarsi more or less reddish-flavous. With sparse dark hairs.

Head rather wide; with small and fairly dense, sharply defined punctures, becoming denser in front; a shallow depression on each side in front. Antennae fairly long, moderately stout, and obtusely serrated. *Prothorax* moderately transverse, sides gently rounded and narrower at base than at apex, base with a transverse depression. *Elytra* not very long, each separately rounded at apex; with fairly numerous small, but rather sharply defined, rugulose punctures. Basal joint of front *tarsi* with a small black comb. Length, 3 mm.

Hab.—Western Australia: Cue (H. W. Brown). Type (unique), I. 12121.

Close to *H. medioflavus*, and with similarly coloured elytra, but the head simple except for feeble lateral depressions and with, for the genus, very distinct punctures; these are sparser than on the preceding species, and are individually distinct, so that the head is shining, on that species they are so dense as to cause the head to be opaque. The pale portion of the elytra occupies rather more than the median third along the suture, it is somewhat extended on each side towards the base, but does not quite touch the sides, as a result, from above, the black basal portion of the elytra appears to be widely triangular.

HELCOGASTER BREVICORNIS, n. sp.

♂. Black; head in front of eyes, front sides of prothorax, elytra (a slight infuscation about scutellum), antennae, front legs, and knees, more or less flavous. A few dark hairs scattered about.

Head rather small, a wide, feeble, median elevation in front, a shallow depression on each side of it, and a more feeble one behind its middle; a few minute scattered punctures, but becoming dense behind eyes. Antennae short, scarcely reaching base of prothorax, all the joints, except first and eleventh, transverse. *Prothorax* moderately transverse, sides gently rounded, subbasal depression very feeble and ill-defined; a few small punctures scattered about, but becoming more condensed on sides. *Elytra* scarcely twice the length of prothorax; with a few small, rugulose punctures. Basal joint of front *tarsi* large, lopsided, and with a distinct, black, inner comb. Length, 3·5 mm.

Hab.—Western Australia: Coolgardie (Blackburn's collection, from E. Meyrick). Type (unique), I. 11916.

The shallow depressions on the head are as on many females of the genus, and the head itself is rather small for a male, but the front tarsi are unmistakably masculine. On the type the base of the head is exposed and opaque, but it would probably be concealed on most specimens.

HELCOGASTER FLAVIPENNIS, n. sp.

♂. Black; labrum, elytra (a slight infuscation about scutellum), front legs and parts of the others more or less flavous. A few blackish hairs scattered about.

Head rather wide, a feeble trisinuate impression between eyes, a feeble and short median line; a few small punctures scattered about. Antennae thin and not very long. *Prothorax* moderately transverse, sides evenly rounded, subbasal depression almost absent; almost impunctate. *Elytra* rather short, dilated posteriorly; with sparse and minute, rugulose punctures. Basal joint of front *tarsi* large, lopsided, a distinct black comb from base to apex. Length (♂, ♀), 2-3 mm.

♀. Differs in having the head smaller, median line less distinct, a shallow depression each side in front, antennae shorter, prothorax more transverse, and front tarsi combless.

Hab.—South Australia: Quorn (Blackburn's collection and A. H. Elston), Oodnadatta (Blackburn). Type, I. 11898.

In my table would be associated with *H. marginicollis*, which has cephalic armature and bicoloured prothorax; the almost simple head of the male, and pale elytra, except for a slight infuscation about scutellum, readily distinguish from *H. medioflavus;* in appearance it is much like the preceding species, but the head of the male is larger, more transverse, somewhat differently sculptured in front, less of muzzle pale, and pronotum entirely dark. The middle legs are sometimes almost entirely dark, sometimes only infuscated in parts; the hind ones usually have the base of femora obscurely pale; the antennae of the male are usually entirely pale; on the female the apical half, or more, is usually deeply infuscated; on several females the sides of the elytra are slightly infuscated posteriorly.

HELCOGASTER BASICOLLIS, n. sp.

♂. Black; base of prothorax, basal third of antennae and most of legs flavous; elytra obscurely piceo-flavous, blackish about base and suture. With sparse, black hairs.

Head smooth and almost impunctate between eyes, base and sides behind eyes densely punctate; two narrow and rather deep impressions in front. Antennae rather short. *Prothorax* moderately transverse, sides evenly rounded, base and apex subequal, subbasal depression scarcely traceable; a few punctures on sides. *Elytra* rather wide and not very long; with sparse, minute, rugulose punctures. Basal joint of front *tarsi* lopsided, a black comb on the inner edge. Length, 2·75-3 mm.

Hab.—South Australia: Quorn (A. H. Elston). Type, I. 11902.

Allied to the preceding species, but head more conspicuously bifoveate in front, prothorax pale at base, and elytra and legs more obscurely coloured. In my table it would be associated with *H. obliquiceps*, and *H. gagatinus;* the former has head very different and antennae longer; the latter is considerably narrower, with unicolorous prothorax. The head without large excavations and bifoveate in front, is as in many females of the genus, but the front tarsi are essentially masculine. On the two specimens taken by Mr. Elston the elytra from behind are seen to have the sides obscurely flavous, with the base and a fairly wide sutural space (narrowing posteriorly) blackish, but from above, or the sides, the two colours are not sharply defined. On both specimens parts of the tibiae and the hind femora are infuscated.

HELCOGASTER INFLATUS, n. sp.

♂. Black; apical three-fifths of elytra (more on sides), tibiae, and tarsi flavous. With very sparse, black hairs.

Head with a wide shallow depression in front, triangularly narrowed posteriorly and terminated level with hind edge of eyes; with minute scattered punctures, more numerous about eyes than elsewhere. Antennae rather short. *Prothorax* about as long as wide; a deep, transverse, subbasal depression, closed at each end. *Elytra* comparatively long, sides inflated in middle; punctures sparse, minute and rugulose. Basal joint of front *tarsi* slightly lopsided, with a small black comb. Length, 2 mm.

Hab.—South Australia: Port Lincoln (A. M. Lea). Type (unique), I. 11903.

The depression on the head, although from some directions appearing rather wide, could hardly be regarded as a large excavation, as it is rather shallow, and it is almost simple; hence in my table the species might be associated with *H. obliquiceps* and *H. gagatinus*. Regarding the head as largely excavated it would be associated with *H. marginicollis*. It is considerably narrower than *H. flavipennis*, impressions of head and prothorax different, elytra longer, and with more of its base dark; the dark portion has a somewhat rounded outline, and is rather sharply defined. The basal joints of antennae and base of prothorax are not as dark as the adjacent parts, but the different shades of colour are not at once apparent. The inflation of the sides of the elytra commences rather suddenly at the basal third.

HELCOGASTER MELAS, n. sp.

♂. Black; muzzle and three basal joints of antennae obscurely flavous. With sparse, dark hairs.

Head with a rather large, flattened elevation in front; with crowded punctures. Antennae moderately long. *Prothorax* moderately transverse, with a rather small subbasal depression. *Elytra* comparatively long; almost impunctate. Basal joint of front *tarsi* lopsided, with an inner comb. Length (♂, ♀), 2·25-3 mm.

♀. Differs in being without an elevation on head, its punctures more sharply defined in front, antennae somewhat shorter, and front tarsi combless.

Hab.—Victoria: Nelson (Blackburn's collection); South Australia: Lucindale (F. Secker). Type, I. 11895.

The elevation on the head is somewhat bottle-shaped, but the neck of the bottle is shorter than in *H. bacchanalis*, and the two species are otherwise very different. The head, when viewed from behind, appears to have a solitary median tubercle, but this is not as thin as in *H. parallelus*, and from above the head of that species is seen to be largely excavated;

on the present species there is a slight depression immediately behind the elevation. The elevation is somewhat suggestive of that of *H. litoralis*, on a greatly reduced scale, but the head otherwise, and the colours are different. In my table it would be associated with *H. obliquiceps*, which is a smaller species, with more of the head and legs pale, the head flatter between eyes, the elevation of different shape, and antennae much shorter.

HELCOGASTER PUNCTICEPS, n. sp.

♂. Black; muzzle and basal joints of antennae obscurely diluted with red. With sparse, dark hairs.

Head with a vague depression each side in front, leaving a feeble, impunctate, thin, parallel-sided elevation; elsewhere with dense punctures. Antennae rather long and thin. *Prothorax* lightly transverse, with a wide subbasal impression. *Elytra* moderately long; with small, rugulose punctures. Basal joint of front *tarsi* lopsided, with a small comb. Length, 2·25 mm.

Hab.—South Australia: Murray Bridge (A. M. Lea). Type (unique), I. 12122.

In some respects close to the preceding species, but head without a bottle-shaped elevation in front and antennae thinner; in my table it would be associated with *H. obliquiceps* and *H. gagatinus*, from which it differs in its darker head, with dense punctures; these are so dense that (except for the feeble elevation in front) the derm is rendered opaque.

Two females, from Adelaide, possibly belong to this species; they differ from the type in having the head smaller, with much sparser punctures, antennae shorter and thinner, base of prothorax obscurely reddish, and front tarsi combless.

HELCOGASTER CAPSULIFER, n. sp.

♂. Black; three or four basal joints of antennae obscurely reddish. With sparse, black hair.

Head with a flask-shaped elevation bounded by strongly impressed lines; with dense punctures, except on elevation. Antennae rather short and not very thin. *Prothorax* slightly wider than long, with a wide, closed subbasal depression. *Elytra* not very long; almost impunctate. Basal joint of front *tarsi* lopsided and rather large, with an inner comb. Length (♂, ♀), 3 mm.

♀. Differs in having head smaller, its elevation much smaller, entirely frontal, not flask-shaped, without deep bounding lines, punctures more evenly dense, antennae somewhat thinner, and front tarsi combless.

Hab.—New South Wales: Eden (H. J. Carter). Type, I. 11893.

The head has distinct impressions but it is not largely excavated, so in my table would be associated with *H. obliquiceps* and *H. gagatinus;* from which it is distinguished by the flask-shaped elevation, etc. On *H. melas* the elevation rises conspicuously above the general level of the head, on the present species it does not do this, being divided off by impressed lines, which become deep between the antennae; seen from in front, or obliquely from behind, there appears to be a deep, angular, interocular fovea, on each side of the apex of the flask; seen from directly behind there appear to be two minute tubercles near each eye.

A male from Tumby Bay, South Australia, in size, shape, colour, and sculpture of head so closely resembles the type that I think it must represent a variety of the species; its antennae are decidedly—about one-fourth—longer, and the head when viewed directly from behind does not appear to have two minute tubercles near each eye; the flask-shaped elevation, however, is of exactly the same shape.

HELCOGASTER EXCAVIFRONS, n. sp.

♂. Black; two basal joints of antennae bright red. With a few inconspicuous dark hairs.

Head wide, with a large excavation; punctures small and crowded. Antennae moderately long. *Prothorax* slightly transverse, with a rather wide subbasal depression. *Elytra* rather short and wide; almost impunctate. Basal joint of front *tarsi* lopsided, and with an inner comb. Length (♂, ♀), 2·25-2·5 mm.

♀. Differs in having the head smaller, without excavation, punctures more uniformly distributed, antennae shorter, thinner, with the basal joints less brightly coloured, and front tarsi combless.

Hab.—South Australia: Port Lincoln, Tumby Bay (Blackburn's collection). Type, I. 11901.

The cephalic excavation is of irregular depth, its sides touch the front of the eyes, and its hind outline is a gentle curve, but with a slight median impression; the interantennary space is shining; viewed from behind the head appears to have two very small median elevations in front, but to be without one at the side of each eye. In my table it would be associated with *H. niger,* from which the excavation, single at its posterior end, is distinctive.

One of the four females, associated with the two males by Mr. Blackburn, has the base of the prothorax obscurely reddish.

HELCOGASTER ATERRIMUS, n. sp.

♂. Black; second and third joints of antennae and under-surface of first more or less reddish. With a few dark hairs.

Head wide, with a wide and deep excavation, its posterior end obtusely bilobed; behind the excavation with small and dense punctures. *Prothorax* near apex, slightly wider than long, with a rather wide, subbasal depression. *Elytra* moderately long; with numerous minute punctures. Basal joint of front *tarsi* lopsided, with an inner comb. Length (♂, ♀), 2-2·25 mm.

♀. Differs in having the head smaller, non-excavated, and with uniformly dense punctures, antennae shorter and thinner, and front tarsi simple.

Hab.—South Australia: Port Lincoln (A. M. Lea); Western Australia: Yilgarn (Blackburn's collection). Type, I. 11897.

At a glance apparently belonging to the preceding species, but excavation of head of different shape, although almost of the same size; when viewed from behind the head appears to have four small equi-distant conical elevations, the lateral ones slightly larger than the others, and one touching each eye, each lateral one, however, when viewed from the side is seen to be a simple semicircle around the eye; in this it differs distinctly from the following species, in which from the side there appears to be a conspicuous elevation behind the eye, and this elevation is connected by a narrow ridge with a medio-frontal one. In my table it would be associated with *H. niger*, from which it is distinguished by the different excavation and somewhat thinner antennae. On the specimen from Yilgarn the middle of the side of each elytron is pale; on the type the pale portion is scarcely traceable.

HELCOGASTER HOPLOCEPHALUS, n. sp.

♂. Black; four basal joints of antennae, except upper-surface of first, obscurely reddish. Very sparsely pubescent.

Head wide, largely and irregularly excavated and tuberculate; with crowded punctures. Antennae comparatively short and stout. *Prothorax* slightly transverse, subbasal depression shallow and ill-defined; with fairly numerous, minute punctures. *Elytra* moderately long; with small and dense, fairly distinct punctures. Basal joint of front *tarsi* with a small comb. Length (♂, ♀), 2·5-3 mm.

♀. Differs in having the head nontuberculate, with two feeble depressions in front, and a very feeble one between eyes, antennae shorter and thinner, and front tarsi simple.

Hab.—New South Wales: Sydney (Dr. E. W. Ferguson). Type, I. 11920.

The excavation on the head of the male is obtusely bilobed posteriorly. Seen from behind the head appears quadrituberculate, the larger tubercles being adjacent to the eye, and distinct from all directions; but from oblique directions it may be seen that the tubercles represent the ends of a narrow curved ridge on each side. The elytral punctures, although small and somewhat rugulose, are much more distinct than is usual in the genus. In my table would be associated with *H. niger*, which is a larger species, with different excavation, and much longer antennae; it is about the size of *H. gagatinus*, and the females are very similar, but the male has very differently sculptured head.

HELCOGASTER COELOCEPHALUS, n. sp.

♂. Black; parts near eyes, and four basal joints of antennae, more or less flavous. Almost glabrous.

Head wide, with a large and irregular excavation, with small tubercles; in parts densely punctate. Antennae rather long. *Prothorax* near apex slightly wider than long, with a shallow, subbasal depression. *Elytra* moderately long; with minute punctures. Basal joint of front *tarsi* lopsided, with an inner black comb. Length, 2 mm.

Hab.—Northern Queensland (Blackburn's collection). Type (unique), I. 11896.

The excavation on the head is trisinuate posteriorly, the median sinus being bounded by an oblique elevation on each side (from some directions the elevations look like small tubercles). The head, viewed from behind, appears to have four small elevations: two black, median, widely triangular ones, and a pale one, curved inwards, at the side of each eye; from the preceding species, in which the ocular tubercles are black, it is also distinguished by the trilobed posterior end of the excavation. In my table it would be associated with *H. niger*, which has thicker antennae, and head very different, when viewed from behind.

HELCOGASTER TRIANGULIFER, n. sp.

♂. Black; labrum and four basal joints of antennae flavous. A few inconspicuous dark hairs on sides.

Head with a deep, irregular impression or excavation in middle. Antennae rather long and obtusely serrated. *Prothorax* slightly longer than the greatest width, base much narrower than apex; a wide subbasal depression, closed at its ends; a few punctures on sides. *Elytra* moderately long; with minute, indistinct, rugulose punctures. Basal joint of front *tarsi* lopsided, with a small black inner comb. Length, 2·25-3 mm.

Hab.—Victoria: Alps (Blackburn's collection), Lorne (F. E. Wilson), Fern Tree Gully (F. P. Spry). Type, I. 11894.

From an oblique direction the head in front of the excavation appears to have an oblique groove near each eye, then an oblique ridge, then another groove, and then a short median ridge; but from other directions the whole space between the subocular grooves appears to be a feeble semicircular elevation, and in fact its appearance varies with the point of view; the excavation has a wide triangle projecting into its middle from the base of the head, so that its posterior end is obliquely directed behind each eye. The basal portion of the head, which, however, is often concealed, is densely punctate. On the type the sides of the head adjacent to the front are obscurely diluted with red.

Two males, from the Dividing Range (Victoria), differ in being more of a piceous-brown than black, with most of the head, base, and sides near base of prothorax, knees and other parts of legs more or less flavous. Three females, mounted with them and evidently belonging to the species, are coloured as the males, except that one has the prothorax entirely pale; they differ in having the head smaller and nonexcavated, with a slight longitudinal elevation in front, and the front tarsi simple. A male, from the Blue Mountains, has the muzzle and sides of head in front of eyes, base of prothorax, and knees, more or less reddish. A male, from Illawarra, is like the preceding specimen, except that the prothorax is entirely pale. All these males agree in having a wide triangle projecting into the middle of the interocular excavation; in my table they would be associated with *H. niger* (except the one from Illawarra); from which they differ in the antennae, and in the excavation not trisinuate at base. The Illawarra male would be associated with *H. concaviceps*, but its head is of different shape, and differently sculptured, etc.

HELCOGASTER MACROCEPHALUS, n. sp.

♂. Black; labrum, four basal joints of antennae, prothorax, parts of middle and of hind femora, and of tarsi, and most of front legs, more or less reddish. Sides with rather numerous, blackish hairs.

Head rather large, wide, and flat; with two small oblique foveae between eyes, two very small ones in middle behind them, and a shallow longitudinal depression each side in front; with fairly numerous, asperate punctures; towards base densely, transversely strigose. Antennae rather short, third to eighth joints obtusely serrated. *Prothorax* strongly transverse, sides strongly rounded, a wide shallow depression near base; almost impunctate. *Elytra* short, feebly dilated posteriorly; with sparse rugulose punctures. *Legs* not very long, basal joint of front tarsi large, lopsided, and with a black inner comb. Length, 4·5 mm.

Hab.—South Australia: Mount Lofty Ranges (A. H. Elston). Type (unique), I. 12251.

A rather wide species, with head very differently sculptured from the many similarly coloured ones; in width it is second only to *H. major*.

HELCOGASTER OXYTELOIDES, n. sp.

♂. Black; prothorax flavous, basal joints of antennae, tibiae and tarsi, obscurely flavous. With sparse dark hairs, more numerous on sides than elsewhere.

Head rather large; a shallow depression each side in front, with a feeble median elevation between them; apical half shining and with sparse punctures, basal half opaque and with dense ones. Antennae rather long, third to ninth joints distinctly serrated. *Prothorax* moderately transverse, sides and base rounded, a vague open depression near base. *Elytra* short; almost impunctate. Basal joint of front *tarsi* large, lopsided, with a black inner comb. Length, 2·5 mm.

Hab.—Victoria: Sea Lake (J. C. Goudie's No. 829). Type, I. 12123.

The head is much the shape of that of many species of *Oxytelus*, of the Staphylinidae; the impressions on its front are quite distinct, but the head could not be regarded as largely excavated, hence in my table the species would be associated with *H. bilobus*, which has the head even less excavated, and bicolorous elytra. Many of the punctures, at the base of the head, are longitudinally confluent.

A female, mounted with the type by Mr. Goudie, and probably belonging to the species, differs from the male in being smaller (2·25 mm.), in having the pale parts of the legs and antennae more extended, and of a brighter colour, head much smaller, its shining and impunctate portion continued to nearer the base, frontal impressions smaller, antennae shorter, elytra with fairly numerous punctures (which although not sharply defined cause the surface to appear finely rugulose), and front tarsi combless.

HELCOGASTER ATRICEPS, n. sp.

♂. Black; prothorax, basal joints of antennae, and knees more or less flavous. With sparse, dark hairs.

Head rather large, with a deep transverse interocular excavation; densely punctate and opaque. Antennae comparatively long. *Prothorax* about as long as the greatest width (near apex), base much narrower than apex, near base with a wide and rather deep, closed depression. *Elytra* moderately long; with minute, rugulose punctures. Basal joint of front *tarsi* rather large, lopsided, and with a black inner comb. Length, 2 mm.

Hab.—New South Wales: Wentworth Falls (Aug. Simson), Mittagong (A. M. Lea). Type, I. 11908.

In general appearance close to the preceding species, but the head deeply transversely excavated; it is evidently close in appearance also to *H. nigriceps*, but differs from the description in being smaller, head with excavation bisinuate, instead of trisinuate, posteriorly (the sinuations although wide are feeble, and the space dividing them is very obtuse), antennae longer, four of the basal joints partly or entirely pale, and the knees pale. In my table it would be placed with *H. insularis*, which is a much larger species, with the excavation different, the part dividing the sinuations acute, antennae wider, and knees no paler than the adjacent parts. The head of the Mittagong specimen, when viewed from behind, appears to have a minute tubercle on granule close to each antenna, but on the type these are not evident.

HELCOGASTER PIGNERATOR, n. sp.

♂. Black; front of head and a large spot near each eye, prothorax, and part of antennae flavous. With sparse, dark hairs, more numerous on sides of abdomen than elsewhere.

Head rather large, with a wide, sinuous, interocular excavation, its posterior end trisinuate; inter-antennary space irregularly elevated; in parts with dense punctures. Antennae moderately long. *Prothorax* slightly longer than greatest width (near apex), a wide but rather shallow and open depression near base. *Elytra* rather long; minutely rugulose-punctate. Basal joint of front *tarsi* lopsided, with a black inner comb. Length, 5 mm.

Hab.—New South Wales: Sydney (A. and F. R. Zietz). Type (unique), I. 11907.

The three conspicuous spots give the head a curious appearance, the front one at first appears to be confined to the inter-antennary space, but is continued along the sides to near the eyes, and passes completely across the undersurface; the other spots are smaller, round, and sharply defined. In some lights the elytra have a faint bluish gloss, and their extreme lateral margins from the base almost to apex are whitish; two of the basal joints of antennae are decidedly flavous, the three following ones gradually become darker, the others are black; the knees and tips of tibiae are obscurely flavous. The pale inter-antennary elevation is somewhat heart-shaped, and gently concave, from behind it appears a feebly trituberculate process, from the side a curved ridge. In my table would be placed with *H. concaviceps*, which is a smaller and broader species, with head differently coloured and excavated.

HELCOGASTER VENTRALIS, n. sp.

♂. Black; prothorax, each side of three basal segments of abdomen, and three basal joints of antennae flavous; knees and parts of tibiae and tarsi obscurely diluted with red. With rather sparse, blackish hairs.

Head moderately large; with minute, irregularly distributed punctures, becoming crowded at base; a small shallow depression each side in front. Antennae rather short. *Prothorax* distinctly transverse; subbasal depression shallow and ill-defined. *Elytra* rather short; with minute, rugulose punctures. Basal joint of front *tarsi* moderately large, lopsided, and with a black inner comb. Length, 3 mm.

Hab.—South Australia: Mount Lofty (A. H. Elston). Type (unique), I. 11910.

Structurally fairly close to *H. basicollis*, but frontal fovea of head much less distinct, antennae somewhat shorter, and prothorax uniformly pale. In my table it would be placed with *H. pulchripes*, from which it differs in its darker head, with somewhat different frontal impressions, darker antennae, and abdomen partly pale. The head has a distinctly feminine appearance, but the front tarsi are certainly those of a male.

HELCOGASTER APICICORNIS, n. sp.

♂. Black; prothorax, most of front and of middle legs, hind knees, and part of antennae flavous. With sparse, dark hairs.

Head highly polished, with two small but distinct foveae in front, a few minute punctures about base. Antennae rather short, second to fourth joints slightly transverse, fifth to tenth rather strongly transverse, eleventh flat, almost as long as eighth to tenth combined. *Prothorax* distinctly transverse, sides evenly rounded, base and apex equal, a vague depression near base. *Elytra* moderately long; with fairly dense and minute, rugulose punctures. Middle *femora* distinctly dentate, middle tibiae rather strongly curved at base, basal joint of front tarsi large, lopsided, with a black comb from base to apex on inner side. Length (♂, ♀), 2·5-3 mm.

♀. Differs in having the head smaller, antennae shorter and thinner, joints less strongly transverse, apical one smaller and with its tip pointed, middle legs and front tarsi simple.

Hab.—South Australia: Adelaide (Blackburn's collection and A. M. Lea), Mount Lofty (R. J. Burton, A. H. Elston, J. G. O. Tepper, and Lea), Lucindale (B. A. Feuerheerdt, F. Secker, and Lea), Myponga (Elston). Type, I. 11909.

Readily distinguished from all previously described species by the apical joint of the male antennae; its most distinctive shape is that viewed at right angles to its greatest width, when it appears rather wide and parallel-sided, with its tip slightly notched, from other directions it appears rather narrow and somewhat lopsided; the middle legs are also distinctive, the head is slightly smaller in the female than in the male, but the frontal foveae are much the same. In my table it would be placed with *H. pulchripes.* On the male the tarsi and the base of the middle femora are infuscated, the antennae after the third or fourth joint gradually become darker, but even the terminal joint never appears to be black; on the female a greater portion of the front and middle legs is dark. On fresh specimens the prothorax has a decided reddish tinge.

HELCOGASTER CENTRALIS, n. sp.

♂. Black; head (except at base), prothorax, base of antennae, and most of legs flavous.

Head rather wide, with a rounded fovea occupying one-third of the interocular space; between it and eyes flat, and with crowded punctures; an obtuse elevation in front. Antennae moderately long. *Prothorax* near apex wider than long, but rather strongly narrowed to base, near base with a wide and deep closed depression. *Elytra* rather short, dilated and rounded posteriorly; with very minute, rugulose punctures. Basal joint of front *tarsi* lopsided, with a small black comb. Length, 2 mm.

Hab.—New South Wales (Dr. E. W. Ferguson). Type (unique), I. 11923.

At first glance apparently belonging to *H. foveiceps*, but head with a large central impression, instead of one on each side, the antennae pale only at base, and prothorax of different shape; from *H. hackeri* it is still more distinct. In front of the central fovea there is an elevation which might be regarded as a large tubercle, and hence in my table the species might be placed in *i*, and of those there noted it differs from *H. helmsi*, in being much smaller, head of different shape and colour, and legs variegated; *H. tuberculifrons* has head of different shape, elytra bicolorous and legs flavous. On the type the pale parts of the legs are the apical half of femora, front tibiae and tips of the others, and basal joints of tarsi.

HELCOGASTER LATEROFUSCUS, n. sp.

♂. Head behind eyes, sides of prothorax, scutellum, prosternum, mesosternum, abdomen, seven apical joints of antennae, and parts of legs, black or blackish; elsewhere flavous. With sparse, dark hairs; and very sparse, whitish pubescence.

Head rather long, opaque, and densely punctate; a narrow curved impression on each side from near base of eye to labrum, and a faint median line. Antennae moderately long and obtusely serrated. *Prothorax* about as long as wide, apex slightly wider than base, a shallow, open, subbasal depression; punctures fairly dense on sides, but sparse in middle. *Elytra* moderately long, sides evenly dilated posteriorly; punctures very minute and rugulose. Basal joint of front *tarsi* lopsided, with a distinct black comb. Length (♂, ♀), 3·25-5 mm.

♀. Differs in being larger, head with less prominent eyes, curved impressions shorter and less distinct, median line scarcely traceable, less of the base dark, and front tarsi combless.

Hab.—New South Wales: Rydalmere (Dr. E. W. Ferguson), Gosford (H. J. Carter); Queensland: Rockhampton (Macleay Museum). Type, I. 11922.

The sides of the prothorax are rather deeply infuscated, or blackish, on each of the three specimens under examination, so the dark parts are evidently natural and not stains; hence in my table of the genus the species would be associated with *H. obliquiceps*, which has the elytra entirely dark, head somewhat different, and antennae much shorter. On the male the four hind femora are rather dark on the basal half; the front femora, the middle of the four hind tibiae, and the apical tarsal joints, are slightly infuscated. From in front the head of the male appears to have a shallow semicircular impression, marking off a feebly bilobed interocular elevation. The Rockhampton female, probably a very old one, has the head and tibiae entirely pale.

HELCOGASTER FASCIATUS, n. sp.

♂. Piceous-brown and flavous. With very sparse, white pubescence, and with a few dark hairs; a small fascicle of dark hairs near each eye.

Head wide and irregularly impressed. Antennae comparatively long. *Prothorax* distinctly transverse, base much narrower than apex, a rather deep, closed subbasal depression; punctures rather dense on sides, sparse elsewhere. *Elytra* moderately long, a vague depression on each side of suture near base; with dense, minute, rugulose punctures. Basal joint of *tarsi* with a small black apical comb. Length, 2·5 mm.

Hab.—Queensland: Cairns. Type (unique), I. 11912.

The head is entirely pale, the five basal joints of antennae are still paler, with the following ones more or less deeply infuscated, but the tip obscurely pale; the prothorax is of a dingy reddish-brown, with the front paler, but it has the appearance as of being stained; the elytra (except for a wide, median, flavous fascia), abdomen, mesosternum, and metasternum, are piceous-brown; the legs are almost white, with the femora deeply infuscated. The fascia extends from side to side and is sharply and evenly defined on its posterior end, about two-fifths from the apex; its front edge is somewhat irregular. The cephalic excavations are partly obscured by pubescence; according to the point of view they appear to be three or five in number, but apparently there is a large, shallow, median portion, dilated and bisinuate posteriorly, narrower and bisinuate apically; the two small fascicles are very distinct; the punctures on the head are dense in places, but not sharply defined. Regarding the prothorax as partly dark, the species, in my table, would be referred to D, and there associated with *H. marginicollis*, whose head is very differently sculptured; if referred to DD, it would go with *H. maculiceps* and *H. fuscitarsis*, also with different cephalic sculpture. *Carphurus fasciipennis* was described by Fairmaire as having an elytral fascia, but the description differs in many other respects.

HELCOGASTER LATICEPS, n. sp.

♂. Black and flavous. Sides with sparse, dark hairs.

Head wide, a large central fovea closed in front, but open posteriorly, the space between it and each eye flat, densely punctate, rounded posteriorly and joined in front to a small inter-antennary elevation; base with dense, minute punctures. Antennae rather long, obtusely serrated internally. *Prothorax* slightly longer than the apical width, which is distinctly greater than the basal width, a rather wide, deep, closed depression near base, and a small fovea on each side near apex; with small and dense, but unevenly distributed punctures. *Elytra* moderately long; with very minute, rugulose punctures. Basal joint of front *tarsi* lopsided, with a small, black, apical comb. Length, 2·25-2·5 mm.

Hab.—New South Wales: Grenfell (Dr. E. W. Ferguson). Type, I. 11924.

The flat space near each eye is densely punctate, but from some directions appears finely granulate; as there is a distinct fovea in the middle of the head the species might be referred to FF of my table, but the head is very different from all the species there noted; the species, however, is allied to *H. foveiceps*, but the head is differently sculptured, and elytra bicolorous. *H. centralis* has the fovea closed posteriorly, and the front of the head with a large, obtuse tubercle, its prothorax is also of different shape, and elytra of one colour. The elytra are coloured somewhat as in *H. imperator*, but the head and prothorax are very different. The flavous parts are the head (except at extreme base), prothorax, legs (except coxae and base of femora), and three or four basal joints of antennae; part of the side of each elytron is of a different shade of flavous to the prothorax, the black part commences at the base (near to but not touching the sides), is rapidly narrowed towards the suture, and then continued along it to beyond the middle, when it is suddenly dilated to cover the apical two-fifths. On the type the apical joint of antennae is almost as pale as the basal ones, on a second male the apical joint is scarcely paler than the tenth, and the middle and hind tibiae and tarsi are slightly infuscated.

HELCOGASTER PALLIDUS, n. sp.

♂. Flavous: metasternum and six apical joints of antennae deeply infuscated, middle of elytra slightly infuscated. With rather sparse, pale pubescence, a few darker hairs on sides.

Head not very large, with a large obtuse median elevation; punctures dense and irregularly distributed, becoming confluent about base. Eyes rather larger than usual. Antennae long, thin, and scarcely serrated. *Prothorax* distinctly transverse, apex much wider than base, a wide and rather deep closed subbasal depression; punctures small and sparse. *Elytra* rather long; with fairly dense, minute, rugulose punctures. *Legs* long and thin, basal joint of front tarsi with a small, black, apical comb. Length (♂, ♀), 2·25-3 mm.

♀. Differs in having the head smaller, nontuberculate, two shallow impressions in front, and with sparser punctures, antennae thinner and scarcely infuscated towards apex, prothorax less dilated in front, tip of abdomen infuscated, and legs shorter, with combless tarsi.

Hab.—Queensland: Cairns. Type, I. 11953.

The elytra could hardly be regarded as fasciate, as although the apical fourth and basal third are paler than the intervening portion, this is only vaguely infuscated, especially on the female. There is a shallow depression on each side of the tubercle of the male; on its front edge there is a small fovea, and then a transverse ridge, both fovea and ridge invisible from behind. In my table would be referred to FF, but the head is very different from all the species there noted.

HELCOGASTER THORACICUS, n. sp.

♂. Flavous; apical three-fifths of elytra black, metasternum and six or seven apical joints of antennae deeply infuscated. With sparse, pale pubescence, and with some longer pale hairs.

Head moderately long, with two small frontal foveae; with fairly numerous, small, but distinct punctures. Antennae rather long and thin, second joint distinctly shorter than third. *Prothorax* slightly longer than the greatest width (near apex); a deep, narrow impression across middle, not quite extended to sides, and marking the posterior end of a large depression; a small dark fascicle before and one behind its middle; punctures small but rather sharply defined about base and apex. *Elytra* moderately long; with minute, rugulose punctures. Basal joint of front *tarsi* lopsided, with a black inner comb. Length, 3·5-4 mm.

Hab.—Northern Queensland (Blackburn's collection). Type, I. 9203.

Readily distinguished from all other described species of *Helcogaster* and of *Carphurus* by the prothorax of the male; in my table would be associated with *H. simpliciceps*. On the type the tip of the abdomen (apparently owing to a stain) is slightly infuscated, on a second specimen it is entirely pale.

HELCOGASTER HUMERALIS, n. sp.

♂. Flavous; elytra (except shoulders), metasternum, abdomen, and five apical joints of antennae black. Sparsely clothed with ashen pubescence, and with a few longer hairs.

Head with a wide and deep interocular excavation, its posterior end evenly semicircular; a large flat tubercle in front; punctures dense and small. Antennae rather long, moderately serrated. *Prothorax* about as long as the apical width, which is considerably more than that of base; with a large, transverse, closed, subbasal depression. *Elytra* moderately long; with very minute punctures. Basal joint of front *tarsi* with a small black comb. Length (♂, ♀), 2-2·25 mm.

♀. Differs in being larger, head smaller, of a dingy reddish-brown, with less prominent eyes, a vague curved depression instead of the excavation, and a moderately long obtuse ridge, instead of the frontal tubercle, antennae thinner and less serrated, prothorax narrower in front, scutellum black, elytra with less of the shoulders flavous, abdomen wider, and front tarsi combless.

Hab.—Queensland: Cairns district, a pair taken *in cop.* (A. M. Lea). Type, I. 11925.

In my table would be placed with *H. major*, which is a much larger species, with very different head, elytra entirely dark, etc. At a glance the types look like small specimens of *H. maculiceps*, but the head is without a spot, and differently sculptured.

HELCOGASTER SEMINIGRIPENNIS, n. sp.

♂. Flavous; apical half of elytra, mesosternum, and metasternum black, apical joints of tarsi, and part of antennae infuscated. Sparsely clothed.

Head with a small interocular impression, or short median line, an oblique impression each side in front. *Prothorax* slightly longer than wide, apex slightly wider than base, a fairly large, transverse, closed, subbasal depression. *Elytra* moderately long; with very minute, rugulose punctures. Basal joint of front *tarsi* with a small, black comb. Length, 2 mm.

Hab.—Queensland: Cairns, obtained on sticky seeds of *Pisonia brunoniana* (F. P. Dodd). Type (unique), I. 11914.

The three apical joints of antennae are missing from the type, the three basal ones are flavous, the others infuscated. The visible parts of the head are impunctate, but the base is concealed on the type; between the frontal impressions the surface is gently convex, but it could hardly be regarded as tuberculate. In my table the species would be associated with *H. simpliciceps*, from which it is distinguished by its smoother head, with small but distinct impressions, flavous portion of elytra not produced along sides, and entirely pale abdomen. From *H. thoracicus*, it is distinguished by its smaller size and differently sculptured head and prothorax.

DASYTES CORTICARIOIDES, Lea.

This species occurs in abundance in many parts of South Australia, including Price and Kangaroo Islands. Two specimens, from Swan River, are considerably larger (2·25 mm.) than usual, and rather more robust, but probably represent a variety only.

DASYTES ERYTHRODERES, n. sp.

Black; prothorax, legs (partly or entirely), and basal joints of antennae, more or less reddish or flavous. Clothed with short, ashen pubescence; the elytra, in addition, with subdepressed setae.

Head with rather dense and small punctures. Antennae rather short. *Prothorax* widely transverse, sides and base rounded, hind angles rounded off; punctures minute. *Elytra* at base slightly wider than prothorax, sides feebly dilated in middle; with dense, and rather sharply defined punctures. Length, 2-2·5 mm.

Hab.—New South Wales: Mount Kosciusko, 5,700-6,000 feet (R. Helms); Victoria: Dividing Range (Blackburn's collection), Melton, in February (F. E. Wilson); South Australia: Mount Lofty Range (R. J. Burton). Type, I. 12291.

Readily distinguished from all previously named Australian species by the reddish prothorax; of the nine specimens before me six have it entirely pale, on two the disc is slightly, and on the other deeply infuscated; four specimens (from Mount Kosciusko, slightly larger than the others, and with the prothorax entirely pale) have the femora black; one of the Victorian specimens has the tarsi infuscated, on all the others the legs are entirely pale. From above the clothing appears to be uniform pubescence, but from the sides short setae may be seen on the elytra. On one female specimen the head, from some directions, appears to have two shallow depressions in front.

DASYTES CRIBARIUS, n. sp.

Black, elytra with a slight coppery-green gloss, tibiae, tarsi, and second to sixth joints of antennae somewhat reddish. Clothed with short, ashen pubescence; in addition with numerous suberect, dark setae.

Head with crowded punctures, becoming somewhat larger and sharply defined in front; with two distinct longitudinal impressions in front. Antennae scarcely extending to base of prothorax, most of the joints transverse. *Prothorax* scarcely one-fourth wider than long, base slightly incurved at middle, hind angles rounded off; with dense and sharply defined punctures. *Elytra* wider than prothorax, parallel-sided to near apex; with dense punctures, at base slightly larger than on prothorax, becoming smaller posteriorly; with faint remnants of striation. Length, 2·75 mm.

Hab.—South Australia: Mount Lofty Ranges (J. G. O. Tepper). Type (unique), I. 12283.

Distinguished from all previously named Australian species, except *D. fuscipennis*, by the upright clothing on prothorax, in addition to the pubescence; from that species it is distinguished by its narrower and more convex form, much smaller eyes, prothorax with much denser and smaller punctures, elytra with a metallic gloss, and with smaller punctures, etc.

DASYTES HEXATRICHUS, n. sp.

Black; upper-surface with a coppery gloss. Densely clothed with short, depressed, pale pubescence; head in addition with two long hairs, and two on each side of prothorax.

Head rather wide, with small crowded punctures, with two conspicuous longitudinal impressions in front, the intervening space bronzy. Antennae rather short, some of the joints transverse. *Prothorax* almost twice as wide as long, sides and base finely margined, hind angles rounded off; with crowded and small, asperate punctures. *Elytra* distinctly wider than prothorax, parallel-sided to near apex; with crowded and small punctures, mostly separately impressed, but in places asperate and subconfluent. Length, 3·25-4 mm.

Hab.—Western Australia: Cue (H. W. Brown). Type, I. 12287.

Structurally close to *D. squiresensis*, but elytra pubescent only, and six long hairs on head and prothorax; *D. abundans*, with similar hairs, is a much smaller species, with legs and antennae partly pale, and frontal impressions much less conspicuous.

DASYTES ABDOMINALIS, n. sp.

Black. Densely clothed with ashen pubescence, the elytra in addition with numerous subdepressed setae.

Head with dense and small punctures, rather more distinct about base than elsewhere; two vague depressions in front. Antennae short, most of the joints transverse. *Prothorax* almost twice as wide as long, sides and base rounded and very finely margined, hind angles rounded off, a vague transverse depression near base; punctures minute. *Elytra* very little wider than prothorax at base, sides feebly dilated to near apex; with dense and rather sharply defined punctures, in places slightly confluent, and becoming smaller posteriorly. Length, 2·5-3 mm.

Hab.—Western Australia: Yilgarn (Blackburn's collection, from E. Meyrick). Type, I. 12288.

Rather more robust than *D. australiae*, impression near base of prothorax fainter, and elytral clothing of two kinds;

seen from above it appears to be uniform, but from the sides there may be seen numerous short sloping setae, amongst the pubescence, in consequence, in my table,(21) the species would be associated with *D. squiresensis*, from which it differs in having the setae less erect, and in its entirely dark legs. On one sex the apical segment of the abdomen is widely concave in the middle, and with a subtuberculate swelling on each side. On a few specimens the upper-surface, or the elytra only, have a very feeble metallic gloss.

Dasytes pictipes, n. sp.

Black; parts of antennae and of legs flavous. Clothed with short, depressed, ashen pubescence.

Head with rather dense and minute punctures; two vague depressions in front. Antennae rather short. *Prothorax* widely transverse, sides and base rounded and finely margined, hind angles rounded off, a shallow transverse depression near base; with dense and small punctures, larger near base than elsewhere. *Elytra* very little wider than prothorax at base, sides slightly dilated to near apex; with dense and small, but sharply defined punctures. Length, 2-2·25 mm.

Hab.—New South Wales: Dorrigo (W. Heron). Type, I. 12286.

Of the eight specimens before me the tibiae and tarsi are pale on all, most of them have the trochanters and knees pale, and one has the entire front legs pale; the antennae are entirely pale, or with some of the apical joints infuscated; parts of the muzzle are also pale. In my table would be associated with *D. bourgeoisi* (n. pr., now *D. julesi)*, from which it differs in being smaller, and prothorax with a shallow subbasal depression; *D. australiae*, with somewhat similar depression, is slightly less robust, and with entirely dark legs and antennae.

Dasytes ellipticus, n. sp.

Black; antennae (apical half infuscated) and legs (middle and hind femora more or less deeply infuscated) flavous. Clothed with short, ashen pubescence.

Head with small and fairly numerous punctures, two feeble depressions in front, and a still more feeble one in middle. Antennae slightly passing base of prothorax, fifth joint distinctly smaller than fourth or sixth. *Prothorax* at base almost twice as wide as long, front convex in middle, strongly rounded to sides, base and sides finely margined;

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(21) Lea, Trans. Ent. Soc. Lond., 1909, p. 240.

punctures minute and inconspicuous. *Elytra* at base scarcely wider than base of prothorax, sides feebly dilated to about middle, with dense and small, but rather sharply defined punctures. Length, 2·5-2·75 mm.

Hab.—South Australia: Parachilna (E. L. Savage). Type, I. 12284.

The sides of the elytra have short, semidecumbent setae posteriorly; they are fairly numerous, but distinct only from the sides, there is also a short hair projecting outwards from each side of the base of the prothorax. Very faint remnants of a subbasal depression may be seen on each side of the prothorax. It is an elliptical species, and in my table would be associated with *D. bourgeoisi* (now *D. julesi*), from which it differs in having more of the legs pale, prothorax larger, with the base wider, elytra somewhat shorter and wider and with smaller punctures; structurally it is rather close to *D. blackburni* (*D. helmsi*, n. pr.), but the prothoracic punctures are much smaller, and the legs are partly pale.